HAVE BEEN USED FOR THIS PROJECT.

1 1/2" = 1'-0"

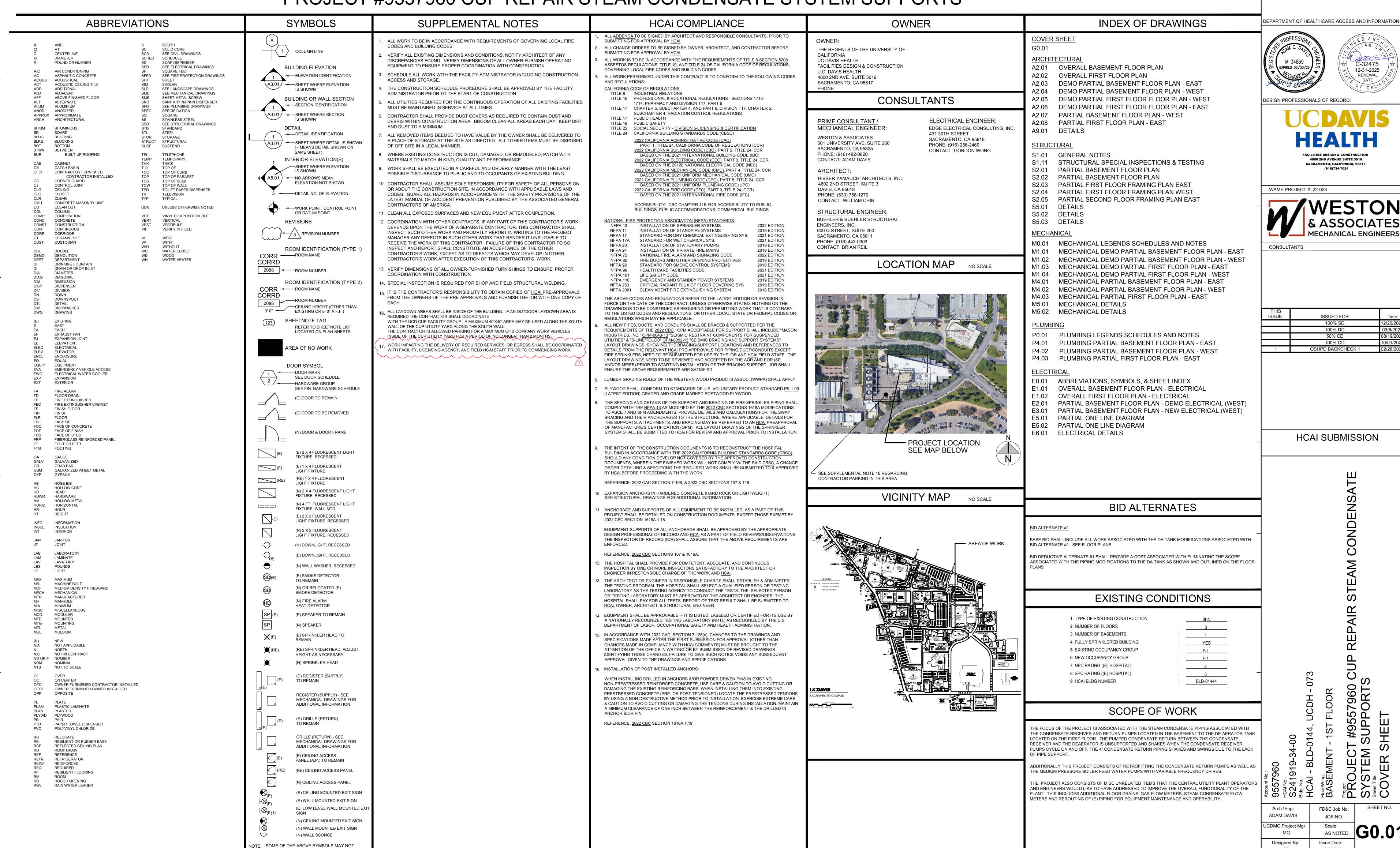
IF THIS SHEET IS NOT 30"x42". IT IS

A REDUCED PRINT SCALE ACCORDINGLY 3" = 1'-0"

REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF T24, CCR Department of Health Care Access and Informatio Office of Statewide Hospital Planning and Developmen 4/7/2025, 3:28:21 PM S241919-34-00 Tony Tan

UC DAVIS HEALTH UNIVERSITY OF CALIFORNIA DAVIS MEDICAL CENTER 4840 2ND AVE SACRAMENTO, CA 95817

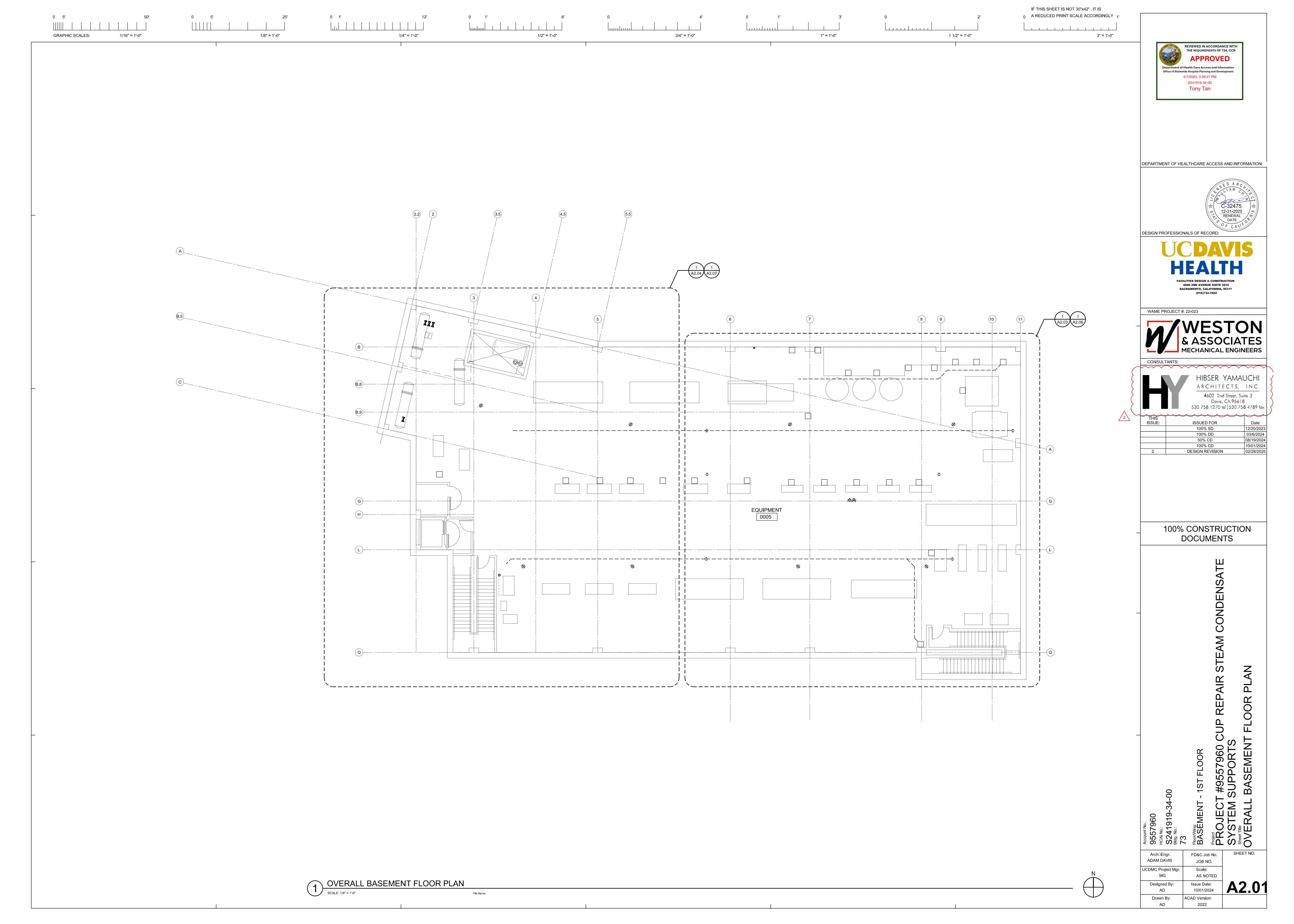
PROJECT #9557960 CUP REPAIR STEAM CONDENSATE SYSTEM SUPPORTS

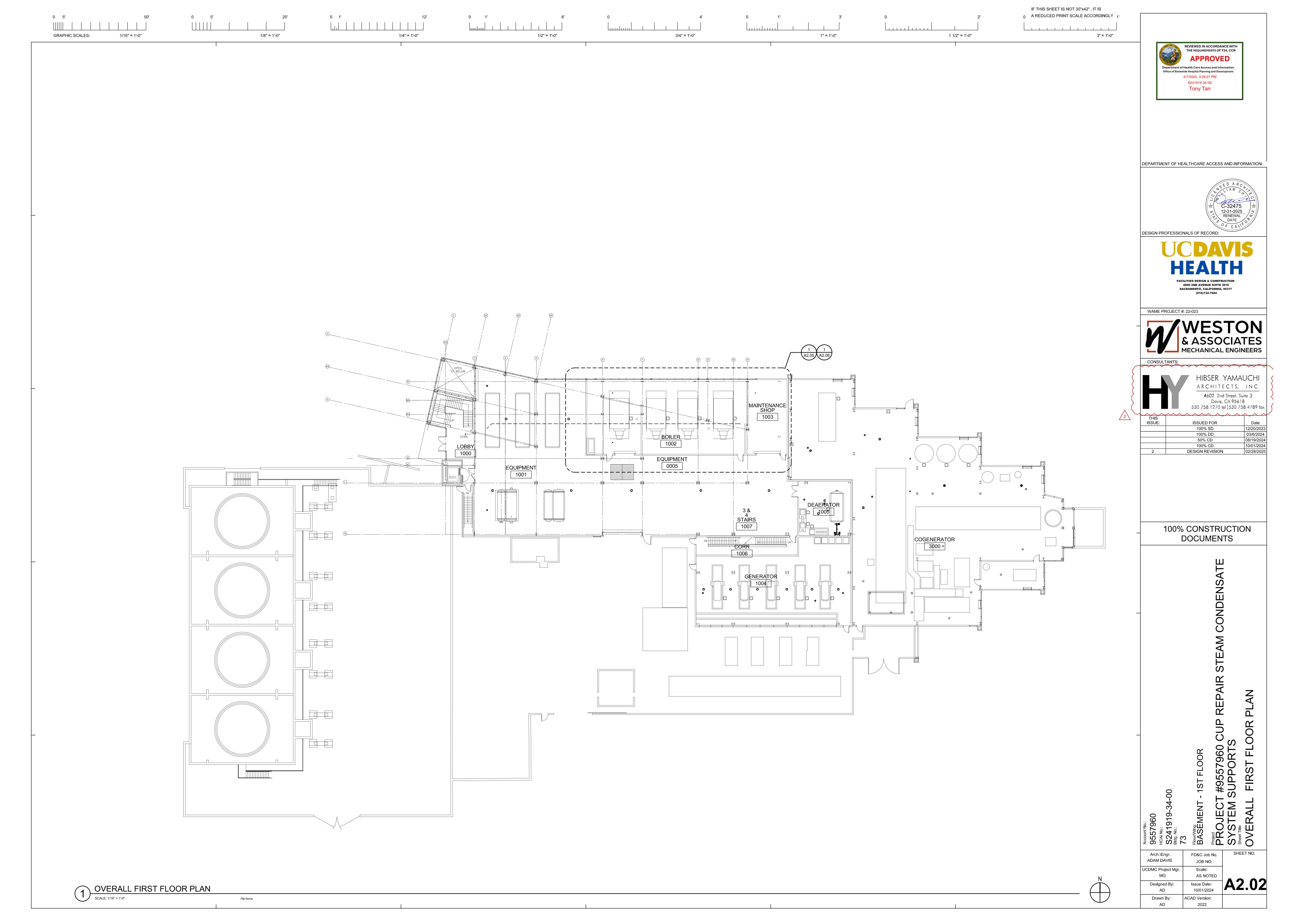


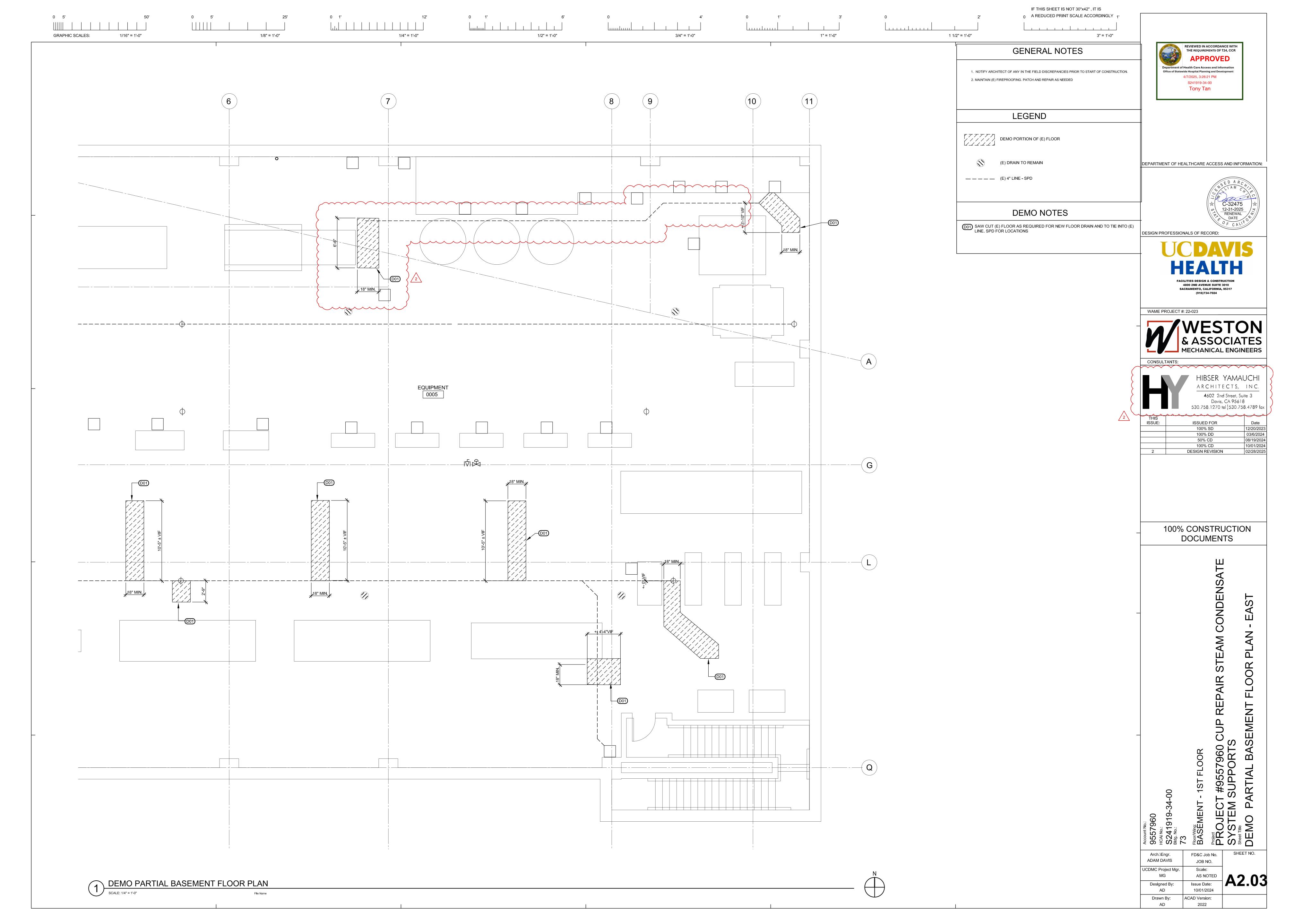


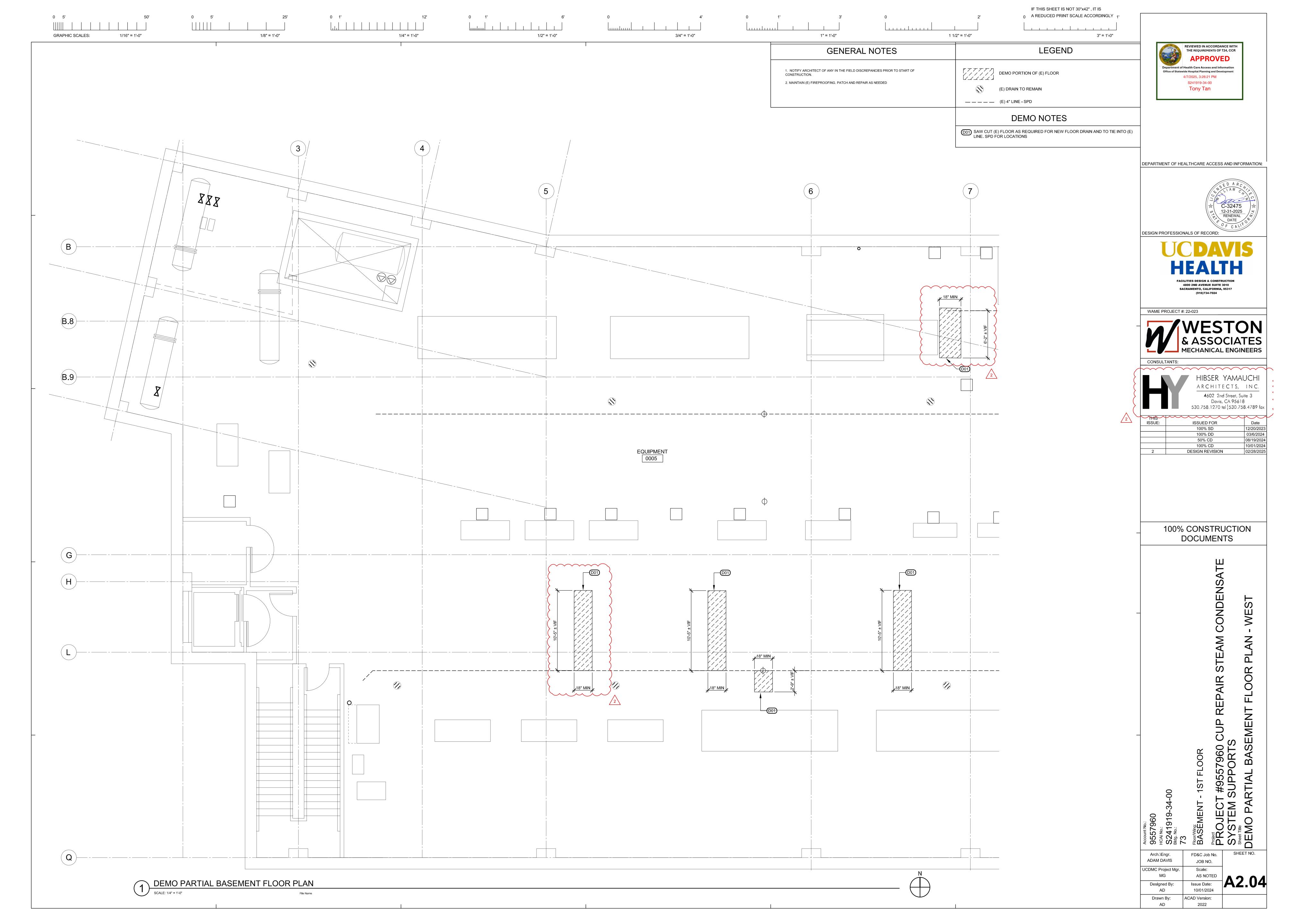


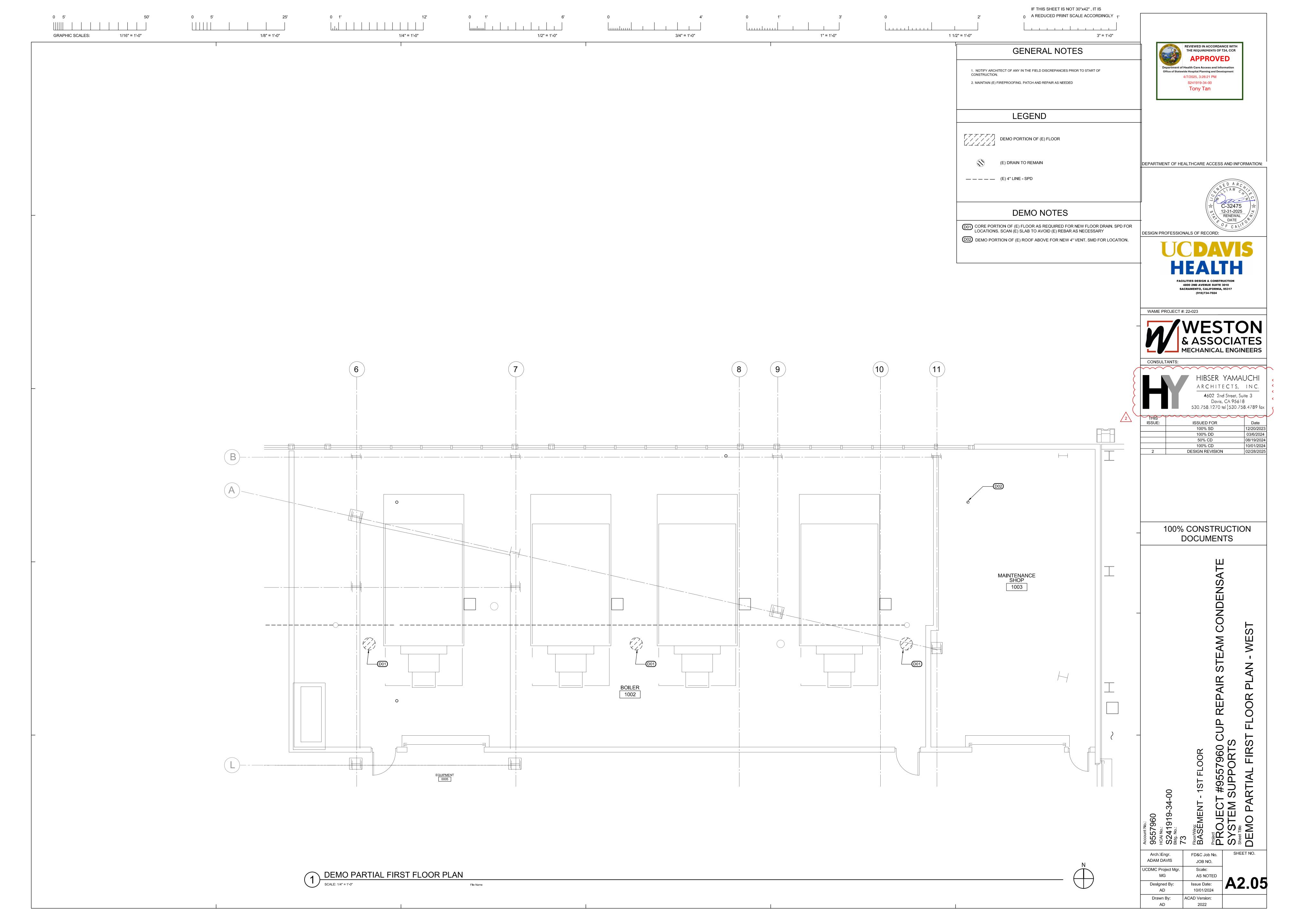
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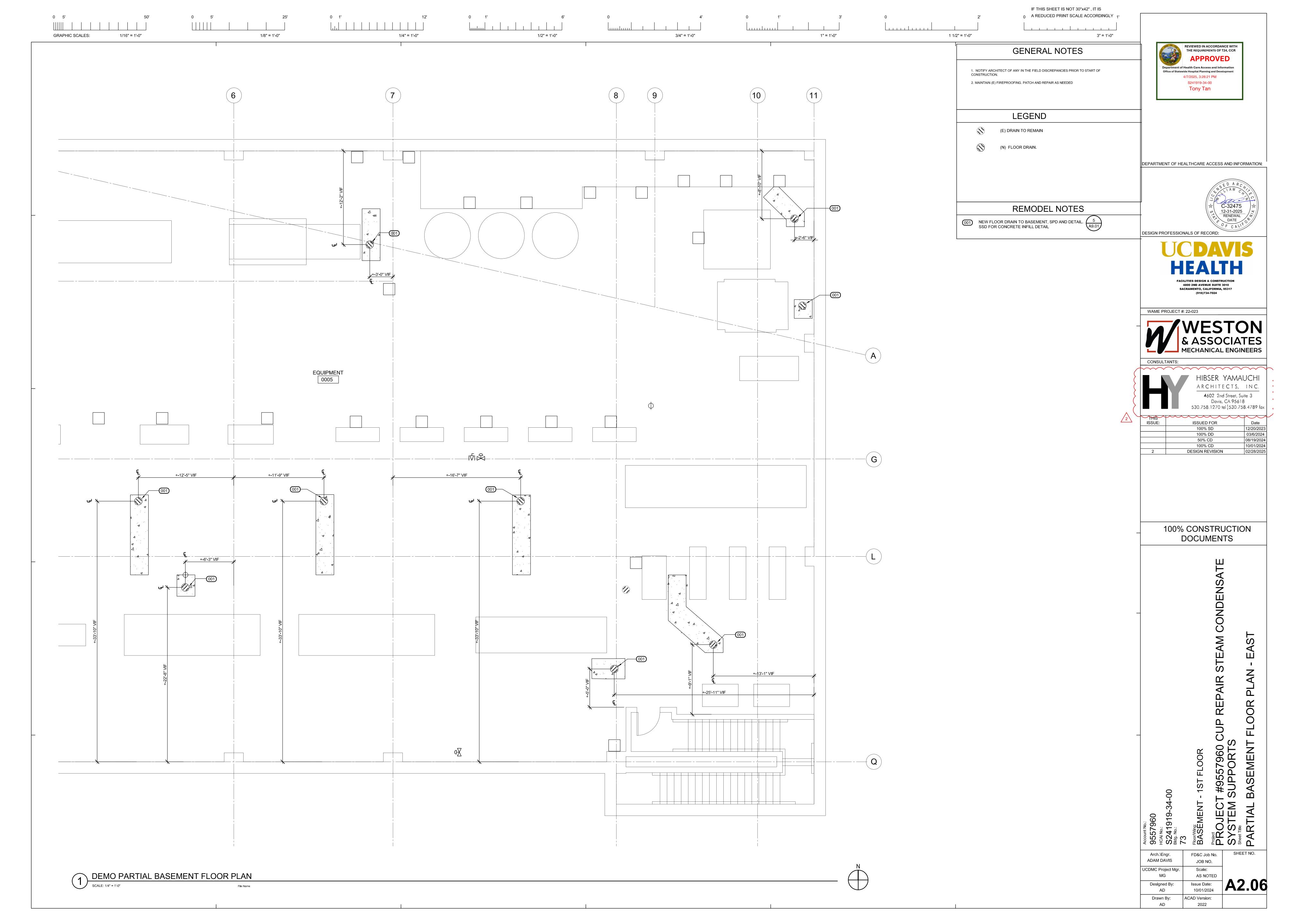


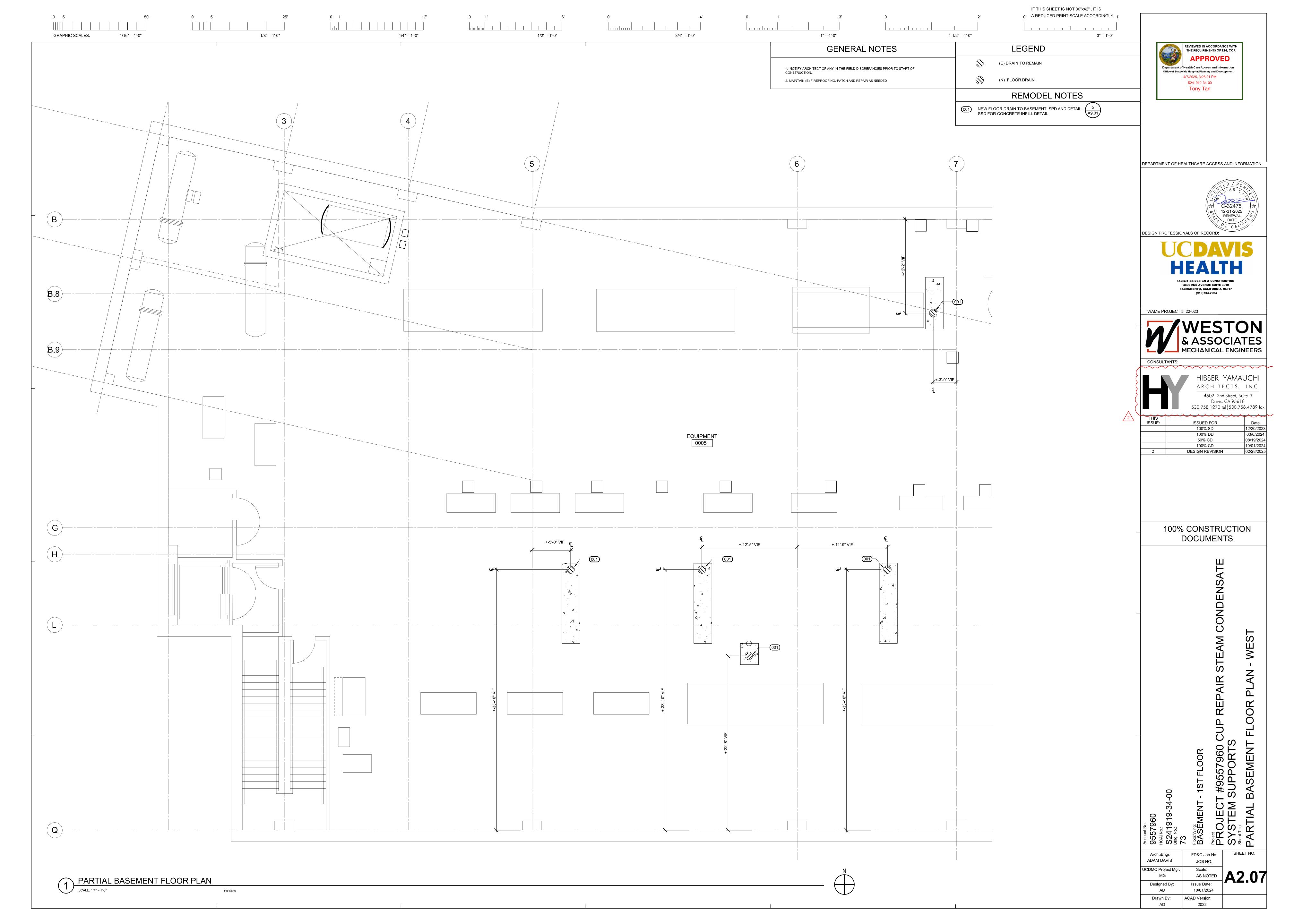


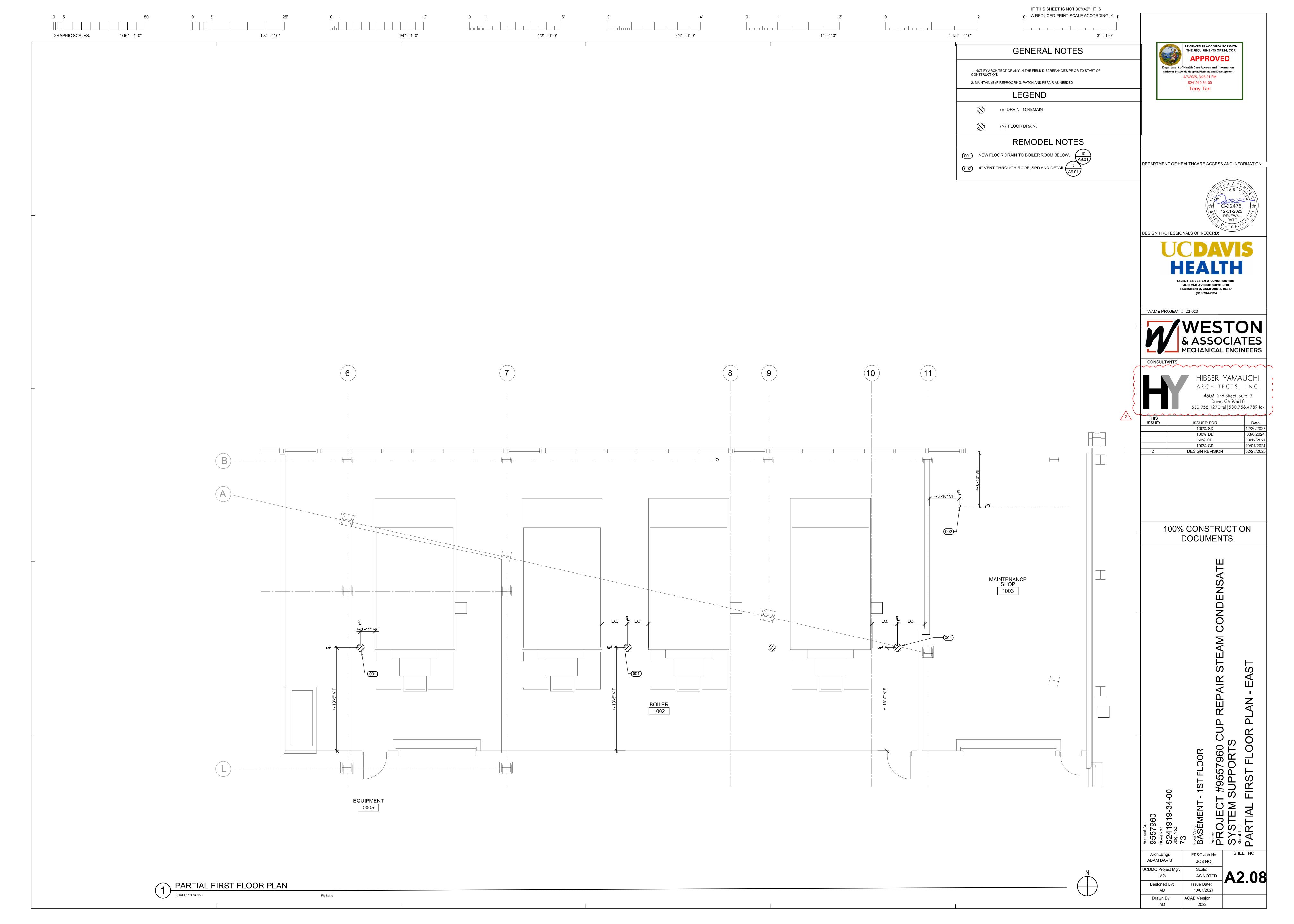


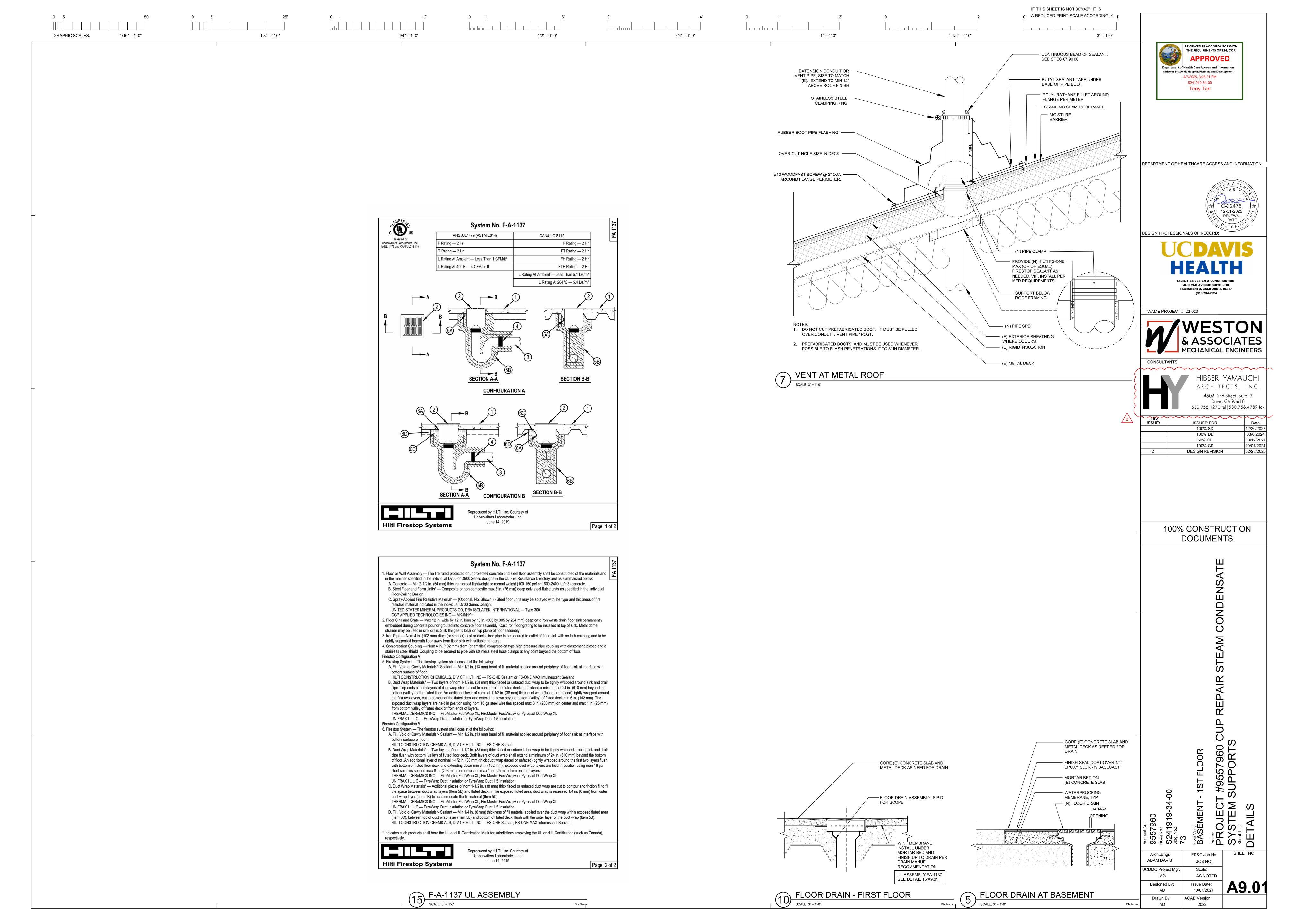












STRUCTURAL STEEL

1. FABRICATION, ERECTION AND MATERIALS SHALL CONFORM WITH THE AISC SPECIFICATION FOR

A6, UNO IN THE STRUCTURAL DRAWINGS. STRUCTURAL STEEL SHALL BE AS FOLLOWS:

A. WIDE FLANGE AND WT SHAPES: ASTM A992

. ROUND HSS: ASTM A500 GRADE C (Fy = 50 KSI)

B. M- AND S- SHAPES: ASTM A572 GRADE 50

C. C- AND MC- SHAPES: ASTM A992

D. L- SHAPES: ASTM A572 GRADE 50

. CONNECTION MATERIAL

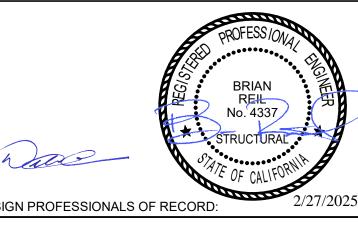
2. ALL HOT ROLLED STEEL SHAPES, PLATES AND BARS SHALL BE NEW STEEL CONFORMING TO ASTM

1 1/2" = 1'-0"

3" = 1'-0" REVIEWED IN ACCORDANCE WITH THE REQUIREMENTS OF T24, CCR

Department of Health Care Access and Information Office of Statewide Hospital Planning and Development 4/7/2025, 3:28:21 PM S241919-34-00 Tony Tan

DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION:







CONSULTANTS: 00 Q STREET SACRAMENTO, CA 9581

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SHEET NO. FD&C Job No. JOB NO. Scale: AS NOTED Issue Date: 12/20/2024

ACAD Version:

2022

GENERAL NOTES APPLICABLE TO ALL DRAWINGS UNLESS NOTED OR SHOWN OTHERWISE

GENERAL NOTES

- 1. INTERPRETATION OF DRAWINGS & SPECIFICATIONS A. WHERE SPECIFICATIONS HAVE BEEN PREPARED FOR THIS PROJECT, THEY ARE ARRANGED IN SEVERAL SECTIONS, BUT SUCH SEPARATION SHALL NOT BE CONSIDERED AS THE LIMITS OF THE WORK REQUIRED OF ANY SEPARATE TRADE. THE TERMS AND CONDITIONS OF SUCH LIMITATIONS ARE WHOLLY BETWEEN THE CONTRACTOR AND THEIR
- SUBCONTRACTORS. B. IN GENERAL, THE WORKING DETAILS WILL INDICATE DIMENSIONS, POSITION AND KIND OF CONSTRUCTION, AND THE SPECIFICATIONS, QUALITIES AND METHODS. ANY WORK INDICATED ON THE WORKING DETAILS AND NOT MENTIONED IN THE SPECIFICATIONS, OR VICE VERSA, SHALL BE FURNISHED AS THOUGH FULLY SET FORTH IN BOTH. WORK NOT PARTICULARLY DETAILED. MARKED OR SPECIFIED. SHALL IDENTICAL OR SIMILAR TO LIKE CASES OF CONSTRUCTION THAT ARE DETAILED. MARKED OR SPECIFIED. IF CONFLICTS OCCUR ON DRAWINGS AND/OR SPECIFICATIONS, THE MOST EXPENSIVE MATERIALS OR
- METHODS WILL PREVAIL. C. SHOULD AN ERROR APPEAR IN THE WORKING DETAILS OR SPECIFICATIONS OR IN WORK DONE BY OTHERS AFFECTING THIS WORK, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AT ONCE AND IN WRITING. IF THE CONTRACTOR PROCEEDS WITH THE WORK SO AFFECTED WITHOUT HAVING GIVEN SUCH WRITTEN NOTICE AND WITHOUT RECEIVING THE NECESSARY APPROVAL, DECISION OR INSTRUCTIONS IN WRITING FROM THE OWNER, THEN THE CONTRACTOR SHALL HAVE NO VALID CLAIM AGAINST THE OWNER. FOR THE COST OF SO PROCEEDING AND SHALL MAKE GOOD ANY RESULTING DAMAGE OR DEFECT. NO VERBAL APPROVAL, DECISION, OR INSTRUCTION SHALL BE VALID OR BE THE BASIS FOR ANY CLAIM AGAINST THE OWNER, ITS OFFICERS, EMPLOYEES OR AGENTS. THE FOREGOING INCLUDES TYPICAL ERRORS IN THE SPECIFICATIONS OR NOTATIONAL ERRORS IN THE WORKING DETAILS WHERE THE INTERPRETATION IS DOUBTFUL OR WHERE THE ERROR IS SUFFICIENTLY APPARENT AS TO PLACE A REASONABLY PRUDENT CONTRACTOR ON NOTICE THAT, SHOULD THE CONTRACTOR ELECT TO PROCEED, THEY ARE DOING SO AT 9. WIRE FABRIC SHALL CONFORM TO ASTM A1064. THEIR OWN RISK.
- CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS. SHOP DRAWING NOTE:
- A. WHEN NOT ADDRESSED BY DIVISION 1 OF THE SPECIFICATIONS, SUBMITTALS SHALL BE ELECTRONIC PDF FORMAT B. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE STRUCTURAL ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL THE CONTRACTOR INTENDS TO FURNISH AND INSTALL. AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS THE CONTRACTOR INTENDS TO USE ON A STAND ALONE SET OF DOCUMENTS. DUPLICATION OF DESIGN DOCUMENTS FOR THE PURPOSE OF SHOP DRAWINGS IS NOT ACCEPTABLE. C. PRIOR TO FABRICATION, SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER. SHOP DRAWING SUBMITTALS SHALL INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, STRUCTURAL STEEL, REINFORCING STEEL, & GLUE-LAMINATED
- D. PRIOR TO SUBMISSION THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND SHALL STAMP SUBMITTALS AS
- BEING "REVIEWED FOR CONFORMANCE". E. SHOP DRAWING SUBMITTALS PROCESSED BY THE STRUCTURAL ENGINEER ARE NOT
- CHANGE ORDERS. F. ANY DETAIL ON THE SHOP DRAWINGS THAT DEVIATES FROM THE CONTRACT DOCUMENTS SHALL CLEARLY BE MARKED WITH THE NOTE "THIS IS A CHANGE" G. SHOP DRAWINGS OR CALCULATIONS SUBMITTED FOR REVIEW THAT REQUIRE RESUBMITTAL FOR RE-REVIEW SHALL BE BILLED HOURLY FOR SUCH TIME TO THE GENERAL CONTRACTOR. RE-REVIEW WILL NOT PROCEED WITHOUT WRITTEN APPROVAL FROM THE GENERAL CONTRACTOR FOR ADDITIONAL ENGINEERING REVIEW SERVICES.
- SAFETY NOTE A. IT IS THE CONTRACTORS RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT. OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA LATEST EDITION, AND ALL OSHA REQUIREMENTS. B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS AND SHORING REQUIRED. SHORING INDICATIONS (LOCATION, DIRECTION, DURATION, ETC.) ARE ONLY SHOWN ON THE STRUCTURAL DRWGS WHEN REQUIRED TO IMPLEMENT THE DESIGN INTENT OF THE FINAL WORK PRODUCT. DETERMINATION WHETHER SHORING IS REQUIRED FOR TEMPORARY OR INTERMEDIATE CONDITIONS
- C. THE OWNER AND THE STRUCTURAL ENGINEER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER WHERE A CONFLICT OR DISCREPANCY OCCURS BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER PORTION OF THE CONTRACT DOCUMENTS OR EXISTING FIELD CONDITIONS. SUCH NOTIFICATION SHALL BE GIVEN IN DUE TIME SO AS NOT TO AFFECT THE CONSTRUCTION SCHEDULE. IN CASE OF A CONFLICT BETWEEN STRUCTURAL DRAWINGS AND SPECIFICATIONS THE MORE RESTRICTIVE CONDITION SHALL TAKE PRECEDENCE UNLESS WRITTEN APPROVAL HAS BEEN GIVEN FOR THE LEAST RESTRICTIVE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH ARCHITECTURAL PRIOR TO COMMENCING ANY WORK.

DURING CONSTRUCTION IS WHOLLY THE RESPONSIBILITY OF THE CONTRACTOR

- 6. WHERE NO SPECIFIC DETAIL IS SHOWN. THE CONSTRUCTION SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION ON THIS PROJECT. SHOULD THERE BE ANY QUESTION, CONTACT THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO PROCEEDING.
- WHEN CONSTRUCTION ATTACHES TO OR IS WITHIN AN EXISTING BUILDING, A COMPLETE SET OF DRAWINGS OF THE EXISTING BUILDING SHALL BE KEPT ON THE JOB SITE. CONTRACTOR TO OBTAIN THESE DRAWINGS FROM THE OWNER (IF THEY ARE AVAILABLE). CONTRACTOR SHALL PROVIDE AN ALLOWANCE EQUAL TO 2% OF THE BID FOR STRUCTURAL STEEL, MISC. IRON AND REINFORCING STEEL TO BE USED AT THE DISCRETION OF THE STRUCTURAL ENGINEER. UNUSED AMOUNT TO REVERT TO THE OWNER UPON COMPLETION
- OF THE JOB. 9. ANY SUBSTITUTIONS FOR STRUCTURAL MEMBERS, HARDWARE OR DETAILS SHALL BE REVIEWED BY THE ARCHITECT AND STRUCTURAL ENGINEER. SUCH REVIEW WILL BE BILLED ON A TIME AND MATERIALS BASIS TO THE GENERAL CONTRACTOR WITH NO GUARANTEE THAT THE SUBSTITUTION WILL BE ALLOWED.
- 10. DO NOT SCALE DRAWINGS. CONTACT THE ARCHITECT OR STRUCTURAL ENGINEER FOR ANY DIMENSIONS NOT SHOWN
- 11. THESE DRAWINGS ARE NOT COMPLETE UNTIL REVIEWED AND ACCEPTED BY THE ENFORCEMENT AGENCY AND SIGNED BY THE STRUCTURAL ENGINEER.

 CODES AND STANDARDS 2022 CALIFORNIA BUILDING CODE (CBC w/ STATE OF CA AMENDMENTS) ASCE 7-16 ACI 318-19 AISC 360-16, 341-16, 358-16

AISI S100-16 w/ S2-20, S240-20, S400-20

SITE CLASS <u>D (DEFAULT)</u> $S_S = 0.546$; $S_{DS} = 0.496$ $l_P = 1.5 \text{ PER ASCE } 7-16 \text{ SECT } 13.1.3$ RISK CATEGORY: IV SEISMIC DESIGN CATEGORY: D

2. LATERAL LOADS

HOSPITAL EQUIPMENT ANCHORAGE

2018 NDS, 2021 SDPWS

TMS 402/602-16

SUPPORTS AND ATTACHMENTS OF ALL EQUIPMENT TO BE INSTALLED AS A PART OF THIS PROJECT SHALL BE DETAILED ON CONSTRUCTION DOCUMENTS, EXCEPT THOSE EXEMPT BY CBC SECTION 1617A.1.18. EQUIPMENT SUPPORTS AND ATTACHMENTS SHALL BE APPROVED BY THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD (RDP) AND OSPHD AS A PART OF FIELD REVIEWS/OBSERVATIONS. THE INSPECTOR OF RECORD (IOR) SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.

EXEMPTION INCLUDE BUT ARE NOT LIMITED TO:

5 POUNDS PER FOOT OR LESS.

 FURNITURE (EXCEPT STORAGE CABINETS) TEMPORARY OR MOVABLE EQUIPMENT. . EQUIPMENT WEIGHING LESS THAN 400 POUNDS WITH A CENTER OF MASS 4 FEET OR LESS ABOVE THE ADJACENT FLOOR LEVEL 4. EQUIPMENT WEIGHING 20 POUNDS OR LESS, OR A DISTRIBUTION SYSTEM WEIGHING

- 1. CONCRETE SHALL ATTAIN 28 DAY COMPRESSIVE STRENGTH AS REQUIRED IN NOTE #28. SPECIFICATIONS.
- 2. CONCRETE MIX DESIGNS SHALL BE PREPARED ACCORDING TO ACL 318 CHAPTER 26.4 AND ACI 301 SECTION 4, REVIEWED BY OWNER'S TESTING LABORATORY AND SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW.
- UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS. SLAG SHALL CONFORM TO ASTM C989. MAX. QUANTITY OF SLAG BY MASS SHALL BE 25% UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS.
- 4. CONCRETE AGGREGATES SHALL CONFORM TO ASTM C-33 FOR NORMAL WEIGHT CONCRETE AND ASTM C-330 FOR LIGHTWEIGHT CONCRETE NON-SHRINK GROUT OR DRYPACK SHALL CONSIST OF A PREMIXED NONMETALLIC FORMULA. . REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60 UNO. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A-706 GRADE 60. CONTRACTOR SHALL SUBMIT
- ALL PREHEATING AND WELDING OF REINFORCING BARS SHALL BE DONE IN ACCORDANCE WITH AWS D1.4 LATEST EDITION AND SHALL BE CONTINUOUSLY INSPECTED BY A QUALIFIED LABORATORY. CONTRACTOR SHALL FURNISH WPS FOR ALL REBAR WELDING TO THE
- PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION". 10. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF BARS LISTED AND

	SHALL BE AS FOLLOWS, UNO:	
	CONCRETE DEPOSITED DIRECTLY AGAINST GROUND (EXCEPT SLABS)	- 3"
	CONCRETE EXPOSED TO GROUND OR WEATHER BUT PLACED IN FORMS:	
	#5 AND SMALLER	1-1/2"
	#6 AND LARGER	2"
	BEAMS & COLUMNS (TIES)	1-1/2"
	BEAMS & COLUMNS (MAIN REINFORCING)	2"
	CAST-IN-PLACE WALLS (EXTERIOR FACE & SOIL SIDE)	SEE ABOVE
	CAST-IN-PLACE WALLS (INTERIOR FACE-#11 & SMALLER)	3/4"
	TILT-UP WALLS	SEE DETAILS
	SLABS (ON FORMS)	3/4"
	SLABS (ON GROUND)	2" CLEAR FROM
		TOP
4	COLLEGE IN CONTINUOUS DEINICODOEMENT CHALL DE LADDED LING, SEE COLLEG	

- 11. SPLICES IN CONTINUOUS REINFORCEMENT SHALL BE LAPPED UNO, SEE SCHEDULE THIS SHEET. SPLICES IN ADJACENT BARS SHALL BE GREATER THAN 5'-0" APART. SPLICE CONTINUOUS BARS IN SOIL-BEARING GRADE BEAMS, STRUCTURAL SLABS ON GRADE AND MAT FOUNDATIONS AS FOLLOWS UNO: TOP BARS AT CENTERLINE OF SUPPORT; BOTTOM BARS AT MID-SPAN. SPLICE CONTINUOUS BARS IN ELEVATED SLABS AND BEAMS, ETC. AS FOLLOWS UNO: TOP BARS AT MID-SPAN; BOTTOM BARS AT CENTERLINE OF SUPPORT. ALL BARS SIZE #14 AND LARGER SHALL BE CONTINUOUS FOR FULL LENGTH SHOWN OR SPLICED WITH MECHANICAL COUPLERS AS NOTED IN DETAILS. SPLICES IN WWF SHALL BE 1-1/2 MESHES WIDE. 12. THE MINIMUM CLEAR SPACING BETWEEN PARALLEL BARS IN A LAYER SHALL NOT BE LESS
- SIZE (NOMINAL), WHICHEVER IS GREATEST. THIS REQUIREMENT ALSO APPLIES TO THE CLEAR SPACING BETWEEN DIFFERENT LAYERS OF PARALLEL BARS AND TO THE CLEAR DISTANCE BETWEEN A CONTACT LAP SPLICE AND ADJACENT SPLICES OR BARS. ALL HOOKS SHALL BE STANDARD HOOKS UNLESS OTHERWISE SHOWN OR NOTED. AT WALLS, PROVIDE HOOKS AT ENDS OF ALL REINFORCING AT ENDS, CORNERS AND INTERSECTIONS,

THAN THE LARGER OF BAR DIAMETER. 1". OR 33% GREATER THAN THE MAXIMUM AGGREGATE

- 14. CONSTRUCTION JOINTS SHALL BE MADE ROUGH AND ALL LAITANCE REMOVED FROM THE SURFACE. CONCRETE MAY BE ROUGHENED BY CHIPPING THE ENTIRE SURFACE. SAND BLASTING, OR RAKING THE SURFACE TO PROVIDE 1/4" DEEP DEFORMATIONS.
- SHALL BE SECURELY POSITIONED BEFORE PLACING CONCRETE. BE HEADED BOLTS WITH CUT THREADS CONFORMING TO ASTM F1554, UNO. REFER TO "WOOD" NOTES FOR ADDITIONAL REQUIREMENTS FOR BOLTS IN CONTACT WITH PRESSURE TREATED OR FIRE RETARDANT MATERIAL. REFER TO 'STRUCTURAL STEEL' NOTE FOR REQUIREMENTS FOR ANCHOR RODS (AR'S) CAST IN CONCRETE FOR COLUMN BASE PLATE AND STEEL EMBED
- 18. WALLS SHALL BE CAST IN HORIZONTAL LAYERS OF 2'-0" MAXIMUM DEPTH. 19. CONCRETE IN WALLS, PIERS OR COLUMNS SHALL SET AT LEAST 2 HOURS BEFORE PLACING CONCRETE IN BEAMS, SPANDRELS, OR SLABS SUPPORTED THEREON.
- 20. HORIZONTAL WALL BARS IN MULTI-CURTAIN CAST IN PLACE WALLS SHALL BE STAGGERED. 21. DOWEL ALL VERTICAL REINFORCING IN WALLS AND COLUMNS FROM FOUNDATION WITH SAME
- 22. CONSOLIDATE CONCRETE PLACED IN FORMS BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND-SPADING, RODDING OR TAMPING. USE EQUIPMENT AND PROCEDURES FOR CONSOLIDATION OF CONCRETE IN ACCORDANCE WITH THE RECOMMENDED PRACTICES OF ACI 309 TO SUIT THE TYPE OF CONCRETE AND PROJECT CONDITIONS. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN CHUTES OR TRUNKS OF VARIABLE LENGTHS SHALL BE USED SO THAT THE FREE UNCONFINED
- NO WOOD SPREADERS ALLOWED. NO WOOD STAKES ALLOWED IN AREAS TO BE CONCRETED. 24. ADDITIONAL REINFORCING IN PRECAST OR TILT-UP PANELS REQUIRED FOR LIFTING STRESSES
- SHALL BE SUPPLIED BY CONTRACTOR. 25. PROVIDE #4x4'-0" DIAGONAL REINFORCING AT EACH REINFORCING LAYER OF SLAB AT ALL RE-ENTRANT CORNERS TYPICAL UNO. THIS APPLIES TO SLAB ON GRADE, CONCRETE OVER METAL
- DECK, AND ELEVATED STRUCTURAL SLAB CONDITIONS DAMAGE BY THE SAW BLADE. BUT BEFORE INITIAL SHRINKAGE HAS OCCURRED.
- 28 DAYS SIZE WEIGHT A. SLAB ON GRADE 3500 PSI NW 0.45
- * W/CM = WATER : CEMENTITIOUS MATERIAL RATIO

LAP SPLICE LENGTHS FOR GRADE 60 REINFORCING BARS IN TENSION (Lst)
(ALL LENGTHS SHOWN ARE IN INCHES)

l	fc= 3500 PSI CONC										
	SPLICE CLASS	REINF LOCATION	#3	#4	#5	#6	#7	#8	#9	#10	#11
I	J	TOP	26	35	43	52	75	86	97	109	121
	В	OTHER	20	27	33	40	58	66	75	84	93

MULTIPLIERS LISTED IN THE NOTES ABOVE.

L_{ST} = TENSION LAP SPLICE LENGTH

CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE. SCHEDULE APPLIES TO NORMAL WEIGHT CONCRETE WITH UNCOATED, GRADE 60 REINFORCING STEEL FOR #3 BARS AND LARGER.

- ROUND UP TO THE NEAREST WHOLE NUMBER FOR ALL LENGTH CALCULATIONS. Lst SHALL BE 12 INCHES MINIMUM. WHERE EPOXY-COATED BARS ARE USED, MULTIPLY LAP LENGTHS BY 1.2, BUT WHERE EPOXY-COATED BARS HAVE CLEAR COVER LESS THAN 3 BAR DIA. OR CLEAR SPACING LESS THAN 6 BAR DIA., MULTIPLY LAP LENGTHS BY 1.31 FOR TOP REBAR AND 1.5 FOR OTHER REBAR.
- WHEN LIGHTWEIGHT CONCRETE IS USED. MULTIPLY LAP LENGTHS BY 1.33. COVER OF BARS BEING SPLICED IS LESS THAN 1 BAR DIA., MULTIPLY LAP LENGTHS BY 1.50,
- WHERE CLASS A LAP SPLICE IS NOTED IN DETAIL, DIVIDE LENGTHS ABOVE BY 1.30. 8. DEVELOPMENT LENGTH OF DEFORMED BARS, Ld. SHALL BE CALCULATED BY DIVIDING THE LENGTH ABOVE BY 1.30. Ld SHALL BE 12 INCHES MINIMUM. 9. WHEN SPLICING DIFFERENT SIZE BARS, Lst SHALL BE THE GREATER OF Ld OF THE LARGER
- BAR AND Lst OF THE SMALLER BAR. 10. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT OVERLAP. INCREASE LAP LENGTHS BY 20 PERCENT FOR A THREE-BAR BUNDLE AND 33 PERCENT FOR A FOUR-BAR BUNDLE 11. THE LENGTHS SHOWN IN THE SCHEDULE SHALL BE INCREASED BY ALL APPLICABLE

POST-INSTALLED ANCHOR TESTING CRITERIA

- SLUMP SHALL BE 4 INCHES ± 1 INCH WITHOUT ADMIXTURES UNLESS NOTED OTHERWISE IN THE
- . CEMENTITIOUS MATERIALS: CEMENT SHALL CONFORM TO ASTM C-150 TYPE II OR V. FLY ASH SHALL CONFORM TO ASTM C-618. MAX. QUANTITY OF FLY ASH BY MASS SHALL BE 25%
- TERNARY SYSTEMS ARE PROHIBITED.
- REBAR MILL CERTIFICATES. REINFORCING STEEL IN SPECIAL REINFORCED SHEAR WALLS OR MOMENT FRAMES, EXCEPT TIES AND HOOPS, SHALL CONFORM TO ASTM A-706.
- 8. REINFORCING STEEL SHALL BE FABRICATED ACCORDING TO "MANUAL OF STANDARD

DENOTE CLEAR COVERAGE. NON-PRESTRESSED, CAST-IN-PLACE CONCRETE (JUVERAGE
SHALL BE AS FOLLOWS, UNO:	
CONCRETE DEPOSITED DIRECTLY AGAINST GROUND (EXCEPT SLABS)	3"
CONCRETE EXPOSED TO GROUND OR WEATHER BUT PLACED IN FORMS:	
#5 AND SMALLER	1-1/2"
#6 AND LARGER	2"
BEAMS & COLUMNS (TIES)	· 1-1/2"
BEAMS & COLUMNS (MAIN REINFORCING)	2"
CAST-IN-PLACE WALLS (EXTERIOR FACE & SOIL SIDE)	SEE ABOVE
CAST-IN-PLACE WALLS (INTERIOR FACE-#11 & SMALLER)	3/4"
TILT-UP WALLS	SEE DETAILS
SLABS (ON FORMS)	3/4"
SLABS (ON GROUND)	2" CLEAR FROM
,	TOP

- 15. REMOVE ALL DEBRIS FROM FORMS BEFORE CASTING ANY CONCRETE. 16. REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE 17. ANCHOR BOLTS (AB'S) CAST IN CONCRETE FOR WALL SILL AND LEDGER APPLICATIONS SHALL
- APPLICATIONS.
- WALLS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. IN SUCH CASES HOPPERS AND
- FALL OF CONCRETE SHALL NOT EXCEED 6 FEET
- 26. ALL SAW CUTTING SHALL BE DONE AFTER INITIAL SET HAS OCCURRED TO AVOID TEARING OR
- 27. NOTIFY STRUCTURAL ENGINEER A MINIMUM OF 48 HOURS BEFORE PLACING ANY CONCRETE. 28. CONCRETE STRENGTHS & MIX PROPERTIES: RATIO
 - SITE & MISCELLANEOUS SEE CIVIL OR ARCH DRAWINGS

WOW - WATER: OLMENTHOOD MATERIAL NATIO	
SPLICE LENGTHS FOR GRADE 60 REINFORCING BARS IN TENSION (Lst)	
02	

fc= 3500 PSI CONC										
SPLICE CLASS	REINF LOCATION	#3	#4	#5	#6	#7	#8	#9	#10	#11
В	TOP	26	35	43	52	75	86	97	109	121
В	OTHER	20	27	33	40	58	66	75	84	93

_D = DEVELOPMENT LENGTH OF DEFORMED BARS IN TENSION

TOP = HORIZONTAL REINFORCEMENT LOCATED SUCH THAT MORE THAN 12 INCHES OF FRESH

- . WHERE CLEAR SPACING OF BARS BEING SPLICED IS LESS THAN 2 BAR DIA. OR WHERE CLEAR

STRUCTURAL STEEL BUILDINGS, THE AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS AND THE AISC CODE OF STANDARD PRACTICE, LATEST EDITIONS ADOPTED BY THE BUILDING CODE SPECIFIED IN THE DESIGN CRITERIA NOTES, UNO.

- 1. EXPANSION ANCHOR TESTING SHALL COMPLY WITH INSTALLATION TORQUE VALUES PROVIDED IN MANUFACTURER'S EVALUATION REPORT. EPOXY AND SCREW ANCHOR TESTING SHALL COMPLY WITH TENSION TEST VALUES SPECIFIED IN DRAWINGS. TESTING FREQUENCY SHALL COMPLY WITH CBC SECTION 1910A.5.3. 2. APPLY PROOF TEST LOADS TO EXPANSION ANCHORS WITHOUT REMOVING THE NUT IF
- POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS AS THE ORIGINAL NUT USING A TORQUE WRENCH TO APPLY THE TEST LOAD. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE
- 4. TEST EQUIPMENT (INCLUDING TORQUE WRENCHES) IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS: A. <u>HYDRAULIC RAM METHOD</u>: THE ANCHOR SHALL HAVE NO OBSERVABLE MOVEMENT FOR A MINIMUM OF 15 SECONDS AT THE APPLICABLE TEST LOAD. FOR EXPANSION AND SLEEVE TYPE ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE
- WASHER UNDER THE NUT BECOMES LOOSE. B. TORQUE WRENCH METHOD: THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN **EXPANSION TYPE:**
- ONE-HALF (1/2) TURN OF THE NUT FOR 1/4"Ø AND LARGER ANCHORS. PROVIDE SPECIAL INSPECTION AS NOTED IN THE ICC REPORT 7. IF ANY ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME TYPE AND INSTALLED BY THE SAME TRADE SHALL BE TESTED, UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TEST FREQUENCY. ANCHORS PREVIOUSLY TESTED PRIOR TO FAILED TEST SHALL NOT BE RETESTED

ONE-QUARTER (1/4) TURN OF THE NUT FOR 3/8"Ø SLEEVE ANCHORS.

CONCRETE EXPANSION ANCHOR TORQUE TEST VALUE (FT-LB)									
DIAMETER	HILTI	HILTI KB-TZ2		N STRONG DLT 2	DEWALT POWER- STUD+ SD2	DEWALT POWER-STUD SD4 & SD6			
	CARBON STEEL	STAINLESS STEEL	CARBON STEEL	STAINLESS STEEL	CARBON STEEL	STAINLESS STEEL			
1/4"	4	6	4	4		6			
3/8"	30	30	30	30	20	25			
1/2"	50	40	60	65	40	40			
5/8"	40	60	90	80	60	60			
3/4"	110	125	150	150	110	110			
1"	185	185	230						

8. TORQUE EXPANSION ANCHORS TO THE VALUES SHOWN BELOW:

	MASONRY EXPANSION ANCHOR TORQUE TEST VALUE (FT-LB)								
	DIAMETER	HILTI KB-TZ2		SIMPSON WEDGE-ALL	DEWALT POWER- STUD+ SD1				
		CARBON STEEL	STAINLESS STEEL	CARBON STEEL	CARBON STEEL				
	1/4"	4	6						
	3/8"	15	15	20	20				
	1/2"	25	25	35	40				
	5/8"	30	35	55	50				
	3/4"	50	50	120					

POST-INSTALLED ANCHORS

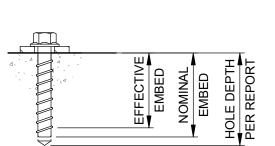
CBC/IBC

- 1. FOR CONCRETE CONSTRUCTION, POST-INSTALLED ANCHORS SHALL BE ONE OF THE FOLLOWING:
- A. ADHESIVE ANCHORS FOR THRD ROD & REBAR: a. HILTI HIT-HY 200 PER ESR-3187
- b. HILTI HIT-RE500 V3 PER ESR-3814 . SIMPSON SET-XP PER ESR-2508
- d. SIMPSON SET-3G PER ESR-4057 e. DEWALT PURE 110+ ESR-3298
- B. EXPANSION ANCHORS: a. HILTI KB-TZ2 PER ESR-4266 b. SIMPSON STRONG BOLT 2 PER ESR-3037
- c. DEWALT POWER-STUD+ SD2, SD4 OR SD6 AS NOTED PER ESR-2502 C. SCREW ANCHORS: a. HILTI KWIK HUS-EZ (KH-EZ) PER ESR-3027
- b. SIMPSON TITEN HD PER ESR-2713 c. DEWALT SCREWBOLT+ PER ESR-3889 FOR GROUT-FILLED MASONRY CONSTRUCTION, POST-INSTALLED ANCHORS SHALL BE ONE OF THE FOLLOWING: A. ADHESIVE ANCHORS FOR THRD ROD & REBAR:
- a. HILTI HIT-HY 270 PER ESR-4143 b. SIMPSON SET-XP PER IAPMO UES ER-265
- c. DEWALT AC 100+ GOLD PER ESR-3200 B. EXPANSION ANCHORS: a. HILTI KB-TZ2 PER ESR-4561
- b. SIMPSON STRONG-BOLT (2) PER IAPMO ER-240 c. DEWALT POWER-STUD+ SD1 PER ESR-2966 C. SCREW ANCHORS: a. HILTI KWIK HUS-EZ (KH-EZ) PER ESR-3056
- . SIMPSON TITEN HD PER ESR-1056 DEWALT SCREWBOLT+ PER ESR-4042 3. ANCHOR TYPE, SIZE & EMBEDMENT SHALL BE AS INDICATED IN DRAWINGS. POST-INSTALLED
- ANCHORS FOR REPAIR SHALL BE EVALUATED ON A CASE BY CASE BASIS. NOTIFY STRUCTURAL **FNGINFFR FOR RFPAIRS** 4. ALL EMBEDMENT DEPTHS CALLED OUT IN DRAWINGS REFER TO EFFECTIVE EMBEDMENT UNLESS OTHERWISE NOTED. SEE DIAGRAM BELOW AND ICC REPORTS.
- 5. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN THE EVALUATION REPORT. PROVIDE MINIMUM EMBEDMENT PROVIDED IN ICC ESR REPORT UNLESS NOTED OTHERWISE PROVIDE SPECIAL INSPECTION AS INDICATED IN THE STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS AND TESTING
- . WHEN INSTALLING POST-INSTALLED ANCHORS IN EXISTING CONCRETE OR MASONRY, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN. DO NOT INSTALL ANCHORS WITHIN 1 1/2" OF CMU HEAD JOINTS. DO NOT INSTALL ANCHORS IN PRESTRESSED CONCRETE ELEMENTS. ANCHORS INSTALLED FROM THE BOTTOM INTO METAL DECK WITH CONCRETE SHALL BE
- INSTALLED IN THE CENTER OF THE LOW FLUTE OF THE DECKING UNLESS NOTED OTHERWISE IN EVALUATION REPORT. THE DECKING SHALL HAVE A MINIMUM THICKNESS OF 20 GAUGE. THE MINIMUM THICKNESS OF THE CONCRETE ABOVE THE HIGH FLUTE OF THE METAL DECK SHALL BE AS INDICATED IN THE EVALUATION REPORT. SEE EVALUATION REPORT FOR ADDITIONAL REQUIREMENTS, INCLUDING MINIMUM DIMENSIONS FOR FLUTE WIDTH AND DEPTH. 9. THE CONCRETE SHALL HAVE ATTAINED ITS MINIMUM DESIGN STRENGTH PRIOR TO
- INSTALLATION OF THE ANCHORS. 10. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT THE TIME OF ANCHOR INSTALLATION PER ACI 318, CHAPTER 17. 11. INSTALLER CERTIFICATION AND INSPECTION IS REQUIRED FOR HORIZONTAL AND UPWARDLY
- INCLINED ADHESIVE ANCHORS SUBJECTED TO SUSTAINED TENSION LOADING IN ACCORDANCE WITH ACI 318, CHAPTER 17, 12. IF TEMPERATURE OF BASE MATERIAL AT TIME OF ADHESIVE ANCHOR INSTALLATION IS 45 DEGREES FARENHEIT OR LOWER, AN "ACRYLIC" OR COLD WEATHER ADHESIVE IS REQUIRED. USE DEWALT AC200+, SIMPSON AT-XP, OR HILTI HIT-HY200 WHEN THIS OCCURS.
- REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE GOVERNING AGENCY AND ARCHITECT/STRUCTURAL ENGINEER. SEE NOTES ON THIS SHEET FOR TESTING CRITERIA.

13. THE TESTING OF THE ANCHORS SHALL BE DONE BY A QUALIFIED TESTING AGENCY AND A

INSTALLED ANCHOR DIAGRAMS

EXPANSION ANCHOR



SCREW ANCHOR

103	
(A) - OCCURS ABOVE	JH - JOIST HANGER
ÀB - ANCHOR BOLT	LL - LIVE LOAD
ABV - ABOVE	LLH - LONG LEG HORIZONTAL
ADDL - ADDITIONAL	LLV - LONG LEG VERTICAL
AHU - AIR HANDLING UNIT	LONGIT - LONGITUDINAL
ALT - ALTERNATE	LS - LAG SCREW
ROX - APPROXIMATE	LW - LIGHTWEIGHT

ARCH - ARCHITECTURAL MECH - MECHANICAL (B) - OCCURS BELOW MFR - MANUFACTURER BLDG - BUILDING MI - MALLEABLE IRON BLKG - BLOCKING × - MARK

GLB - GLUED LAMINATED BEAM

HSB - HIGH STRENGTH BOLT

HSS - HOLLOW STRUCTURAL SECTION

GR - GRADE

GYP - GYPSUM

HDR - HEADER

HGR - HANGER

HORIZ - HORIZONTAL

HK - HOOK

HT - HEIGHT

HD - HOLDOWN

RECTANGULAR HSS: ASTM A500 GRADE C (Fy = 50 KSI) BLW - BELOW MTL - METAL G. PIPE: ASTM A53, GRADE B (Fy = 35 KSI) BM - BEAM (N) - NEW H. BASE PLATES UP TO 4" THICK: ASTM A572 GRADE 50 B.O. - BOTTOM OF NIC - NOT IN CONTRACT I. ALL OTHER PLATE MATERIAL: ASTM A572 GRADE 50, UNO BOF - BOTTOM OF FOOTING NS - NEAR SIDE . BUILT UP COLUMNS: ASTM A572 GRADE 50 BOTT - BOTTOM K. PLATE GIRDERS: ASTM A572 GRADE 50 BRCG - BRACING BRG - BEARING O/ - OVER a. COLUMN CONTINUITY PLATES AND DOUBLER PLATES: ASTM A572 GRADE 50

b. BRACED FRAME GUSSET PLATES: ASTM A572 GRADE 50 BYND - BEYOND 3. ALL STRUCTURAL STEEL SHALL RECEIVE A MINIMUM OF ONE SHOP COAT OF PRIMER PAINT. DO NOT PAINT AREAS TO BE FIELD WELDED, FIREPROOFED, GALVANIZED, TO RECEIVE SLIP-CRITICAL HIGH STRENGTH BOLTS, OR TO BE EMBEDDED IN CONCRETE. PROVIDE ADDITIONAL PAINTING AS NOTED IN THE SPECIFICATIONS. 4. ALL STRUCTURAL STEEL SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING CL - CENTERLINE SHALL BE INSTALLED AND SHALL BE LEFT IN PLACE UNTIL OTHER MEANS ARE PROVIDED TO CLG - CEILING ADEQUATELY BRACE THE STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL

BASE PLATE AND SUPPORT CONDITIONS DURING ERECTION AND BRACING AS REQUIRED. SEE AISC AND OSHA REQUIREMENTS. 5. GROUT BELOW BASE PLATES SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 10,000 PSI AT 28 DAYS UNO. COLUMN BASE PLATES SHALL BE PROMPTLY GROUTED AFTER STEEL FRAME HAS BEEN PLUMBED AND PRIOR TO INSTALLATION OF METAL DECKING.

STRUCTURAL STEEL BELOW GRADE SHALL HAVE 3 INCHES MINIMUM OF CONCRETE COVER.

7. STRUCTURAL BOLTS AND THREADED FASTENERS A. BOLTED CONNECTIONS SHALL CONSIST OF UNFINISHED BOLTS CONFORMING TO ASTM F3125 B. WHERE HIGH-STRENGTH BOLTS ARE SPECIFIED, BOLTS CONFORMING TO ASTM F3125 GRADE A325 OR GRADE A490 SHALL BE PROVIDED AS INDICATED. HIGH STRENGTH BOLTS IN SLIP-CRITICAL AND PRETENSION JOINTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F1852 FOR TWIST-OFF TYPE TENSION CONTROL BOLT PRETENSIONING OR BE PROVIDED WITH DIRECT TENSION INDICATOR WASHERS CONFORMING TO THE REQUIREMENTS OF ASTM F959. ANCHOR RODS CAST IN CONCRETE OR MASONRY SHALL BE HEADED BOLTS WITH CUT THREAD,

FULL DIAMETER BODY STYLE CONFORMING TO ASTM F1554 GRADE 36, 55 (WELDABLE PER S1 SUPPLEMENTARY REQUIREMENTS), OR GRADE 105 AS INDICATED ON DRAWINGS. IN LIEU OF HEADED ANCHOR RODS, THREADED ROD CONFORMING TO THE ABOVE SPECIFICATIONS MAY BE USED WITH DOUBLE NUTS TIGHTENED TO PREVENT ROTATION. ANCHOR ROD PROJECTION ABOVE TOP OF FOUNDATION SHALL BE AS NOTED ON THE DRAWINGS.). BOLTED CONNECTIONS SHALL HAVE WASHERS CONFORMING TO ASTM F436 UNO. WASHERS

MAY BE OMITTED AT SNUG-TIGHTENED AND SLIP-CRITICAL CONNECTIONS, EXCEPT WHERE

REQUIRED BY THE RCSC SPECIFICATION FOR STRUCTURAL JOINTS, LATEST EDITION. E. BASE PLATES SHALL HAVE NUTS AND WASHERS AT TOP AND BOTTOM OF PLATE. WASHERS FOR BASE PLATES SHALL BE A36 SQUARE OR CIRCULAR PLATE UNLESS ASTM F844 WASHERS ARE PERMITTED. SEE BASE PLATE DETAILS FOR PLATE WASHER SIZE AND PERMISSIBLE F. THREADED RODS SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE ON THE

G. PINS: ALL PINS IN PIN CONNECTED MEMBERS SHALL CONFORM TO ASTM A36 OR ASTM A108 AS INDICATED ON THE DRAWINGS. ADDITIONAL REQUIREMENTS FOR "SLIP-CRITICAL" BOLTED CONNECTIONS: A. "SLIP-CRITICAL" CONNECTIONS (A325-SC DESIGN VALUES WITH SPECIAL INSPECTION) ARE REQUIRED AT ALL MOMENT FRAME CONNECTIONS, BRACED FRAME CONNECTIONS, AT ALL BOLTS IN OVERSIZED OR SLOTTED HOLES.

B. THE SPECIAL INSPECTOR MUST BE PRESENT DURING THE INSTALLATION AND TIGHTENING OPERATION OF "SLIP-CRITICAL" CONNECTIONS 9. PROVIDE 3/4" DIAMETER STITCH BOLTS AND RING FILLS, SPACED AT NOT MORE THAN 2'-0" ON CENTER AT ALL DOUBLE ANGLE MEMBERS UNO. 10. AT WOOD TO STEEL PARALLEL CONTACT, BOLT WITH 1/2" DIAMETER BOLTS AT MAXIMUM 24"CC UNLESS NOTED OTHERWISE IN THE DRAWINGS. 11. BOLT HOLES SHALL BE AISC STANDARD HOLES UNLESS SPECIFIED OTHERWISE. USE STANDARD

12. WELDING SHALL BE DONE BY THE ELECTRIC ARC PROCESS IN ACCORDANCE WITH AMERICAN WELDING SOCIETY STANDARDS, USING ONLY CERTIFIED WELDERS. ALL GROOVE WELDS SHALL HAVE COMPLETE PENETRATION UNLESS NOTED OTHERWISE. ALL ELECTRODES FOR WELDING SHALL COMPLY WITH AWS D1.1 AND D1.8 AS APPLICABLE, E70 SERIES MINIMUM. 13. WELD LENGTHS SPECIFIED ON PLANS ARE THE NET EFFECTIVE LENGTHS REQUIRED. 14. MINIMUM FILLET WELDS: (T = THICKNESS OF THINNER PART JOINED)

AISC GAGE AND PITCH FOR BOLTS EXCEPT AS NOTED OTHERWISE

1/4" @ T < 3/4" 15. WELDING PROCEDURE SPECIFICATIONS (WPS) FOR SHOP AND FIELD PREQUALIFIED WELD JOINTS AND WELD JOINTS QUALIFIED BY TEST SHALL BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER AND THE OWNER'S TESTING LABORATORY PRIOR TO FABRICATION. ALL WELDING PROCEDURE ITEMS SUCH AS BASE METALS, WELDING PROCESSES, FILLER METALS AND JOINT DETAILS THAT MEET THE REQUIREMENTS OF AWS D1.1 SECTION 3 SHALL BE CONSIDERED AS PREQUALIFIED. ANY CHANGE OR SUBSTITUTION THAT IS BEYOND THE RANGE OR TOLERANCE OR REQUIREMENTS FOR PREQUALIFICATION SHALL BE QUALIFIED BY TEST PER AWS D1.1 SECTION 4 PART B. SUBMIT TEST REPORTS SHOWING SUCCESSFUL PASSAGE OF QUALIFICATION TESTS FOR

ALL NON-PREQUALIFIED WELDING PROCEDURE SPECIFICATIONS.

3/16" @ T < 1/2"

DRAWINGS.

METAL STRUT SYSTEM 1. METAL STRUT SYSTEM, BOLTS WITH CHANNEL NUTS SHALL BE ONE OF THE FOLLOWING: A. MASON WEST SEISMIC RESTRAINT COMPONENTS PER OPM-0043

8. UNISTRUT SEISMIC BRACING AND SUPPORT SYSTEMS PER OPM-0295-13

. ISAT SEISMIC RESTRAINT GUIDELINES PER OPM-0403 D. EATON B-LINE SEISMIC BRACING AND HANGERS PER OPM-0052 2. METAL STRUTS SHALL BE SOLID AND SHALL NOT BE PRE-PUNCHED.

NTS - NOT TO SCALE NW - NORMAL WEIGHT BTWN - BETWEEN OH - OPPOSITE HAND OPNG - OPFNING CC - CENTER TO CENTER OSB - ORIENTED STRAND BOARD CG - CENTER OF GRAVITY PC - PIECE CJ - CONSTRUCTION JOINT PERP - PERPENDICULAR PJP - PARTIAL JOINT PENETRATION CJP - COMPLETE JOINT PENETRATION PL - PLATE PT - PRESSURE TREATED CLR - CLEAR PW - PUDDLE WELD CMU - CONCRETE MASONRY UNIT REINF - REINFORCING OR REINFORCEMENT COL - COLUMN REQD - REQUIRED CONC - CONCRETE RWD - REDWOOD CONN - CONNECTION SC - SLIP CRITICAL CONT - CONTINUOUS SCH - SCHEDULE CONTR - CONTRACTOR SEOR - STRUCTURAL ENGINEER OF RECORD COORD - COORDINATE SHTG - SHEATHING CSK - COUNTERSINK SIM - SIMILAR DBL - DOUBLE SJ - SLAB CONTROL JOINT DF - DOUGLAS FIR SMS - SHEET METAL SCREW DIAG - DIAGONAL SOG - SLAB-ON-GRADE DL - DEAD LOAD SP - STRUCTURAL PANEL SPCG - SPACING DWG - DRAWING (E) - EXISTING SQ - SQUARE STD - STANDARD EA - EACH EF - EACH FACE OR EDGE FASTENER STFNR - STIFFENER EJ - EXPANSION JOINT STGRD - STAGGERED ELEV - ELEVATION EN - EDGE NAILING STRUCT - STRUCTURAL EOS - EDGE OF SLAB SW - SHEAR WALL T&B - TOP & BOTTOM EW - EACH WAY T&G - TONGUE & GROOVE FB - FACE OF BLOCK/BRICK OR FLAT BAR THRD - THREADED FC - FACE OF CONCRETE TN - TOE NAIL FDN - FOUNDATION T.O. - TOP OF FF - FINISH FLOOR TOC - TOP OF CONCRETE (SLAB UNO) TOF - TOP OF FOOTING OR TOP OF FRAMING FRMG - FRAMING FRT - FIRE RETARDANT TREATED TOS - TOP OF STEEL FS - FACE OF STUD OR FAR SIDE TOW - TOP OF WALL FTG - FOOTING TRANS - TRANSVERSE GA - GAUGE OR GAGE TYP - TYPICAL UNO - UNLESS NOTED OTHERWISE GALV - GALVANIZED

VERT - VERTICAL

VIF - VERIFY IN FIELD

WHS - WELDED HEADED STUD

XXS - DOUBLE EXTRA STRONG

Ø - ROUND OR DIAMETER

WWF - WELDED WIRE FABRIC

WF - WIDE FLANGE

WP - WORK POINT

WS - WOOD SCREW

XS - EXTRA STRONG

DESIGN PROFESSIONALS OF RECORD:

THIS		
ISSUE:	ISSUED FOR	DATE
	100% SD	12/20/202
	100% DD	03/06/202
	50% CD	08/19/202
	100%CD	10/01/202
1	OSHPD BACKCHECK 1	02/28/202

HCAI SUBMISSION

Arch.\Engr. ADAM DAVIS **UCDMC Project Mgi** BOR Designed By:

Drawn By:

STRUCTURAL SHEET INDEX S1.01 GENERAL NOTES S1.11 STRUCTURAL SPECIAL INSPECTIONS & TESTING PARTIAL BASEMENT FLOOR PLAN EAST PARTIAL BASEMENT FLOOR PLAN WEST PARTIAL FIRST FLOOR FRAMING PLAN EAST PARTIAL FIRST FLOOR FRAMING PLAN WEST PARTIAL SECOND FLOOR FRAMING PLAN EAST S2.05 S5.01 DETAILS S5.02 DETAILS

S5.03 DETAILS

3" = 1'-0"

1 1/2" = 1'-0"

STRUCTURAL SPECIAL INSPECTIONS AND TESTING APPLICABLE TO ALL DRAWINGS UNLESS NOTED OR SHOWN OTHERWISE

STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS AND TESTING

- 1. SPECIAL INSPECTIONS AND TESTING SHALL BE PROVIDED BY A TESTING AND INSPECTION AGENCY, EMPLOYED BY THE OWNER (OR OWNER'S AUTHORIZED AGENT), AND APPROVED BY THE BUILDING OFFICIAL TO PROVIDE SPECIAL INSPECTIONS AND TESTING FOR THE PARTICULAR TYPE OF CONSTRUCTION.
- TABLES OF SPECIAL INSPECTIONS AND TESTING ARE DERIVED FROM THE STRUCTURAL PROVISIONS OF THE CBC AND REFERENCED STANDARDS AND ARE FOR REFERENCE ONLY. THE INCLUDED TABLES ARE PROVIDED FOR THE CONVENIENCE OF THE OWNER, TESTING AGENCY AND CONTRACTOR IN DEVELOPING THE SCOPE OF WORK FOR REQUIRED TESTING AND INSPECTION OF STRUCTURAL MATERIALS AND COMPONENTS. FINAL DEFINITION OF THIS SCOPE OF WORK IS TO BE DETERMINED BY THE TESTING AGENCY AND THE OWNER (OR OWNER'S AUTHORIZED AGENT).
- FREQUENCY OF SPECIAL INSPÉCTIONS AND TESTING SHALL BE, AT A MINIMUM, AS NOTED FOR THE INDIVIDUAL ELEMENTS WITHIN THE TABLES BELOW. THE CONTRACTOR SHALL COORDINATE TIMING OF SPECIAL INSPECTIONS AND TESTING WITH THE SPECIAL INSPECTION AND TESTING AGENCY,
- PRIOR TO THE START OF CONSTRUCTION, THE TESTING AND INSPECTION AGENCY SHALL PROVIDE DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING OF THE SPECIAL INSPECTORS WHO WILL PERFORM THE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION, IN ACCORDANCE WITH CBC SECTION 1704A.2.1.

THE TESTING AND INSPECTION AGENCY SHALL SUBMIT REPORTS OF SPECIAL INSPECTIONS

- AND TESTS TO THE BUILDING OFFICIAL, STRUCTURAL ENGINEER OF RECORD AND THE CONTRACTOR, PER CBC SECTION 1704A.2.4. THE REPORTS SHALL INDICATE WHETHER WORK INSPECTED OR TESTED CONFORMED TO THE APPROVED CONSTRUCTION DOCUMENTS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF DISCREPANCIES ARE NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER OF RECORD. S. SPECIAL INSPECTION AND TESTING RECORDS SHALL BE RETAINED BY THE CONTRACTOR ON
- SITE UNTIL COMPLETION OF CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT TO THE BUILDING OFFICIAL ACKNOWLEDGING RESPONSIBILITY FOR CONSTRUCTION OF THE MAIN LATERAL-FORCE RESISTING SYSTEM PRIOR TO COMMENCEMENT OF THAT WORK AS REQUIRED BY CBC
- SECTION 1704A.4. . THE OWNER OR THE OWNER'S AUTHORIZED AGENT SHALL SUBMIT TO THE BUILDING OFFICIAL, A FINAL REPORT DOCUMENTING SPECIAL INSPECTIONS AND TESTS PER CBC SECTION 1704A.2.4, AND REPORTS AND CERTIFICATES PER CBC SECTION 1704A.5.
- 9. ALL SOILS AND FOUNDATION EXCAVATION INSPECTIONS SHALL BE BY THE GEOTECHNICAL ENGINEER OF RECORD, OR A GEOTECHNICAL FIRM HIRED BY THE OWNER PER CBC SECTION
- 10. SPECIAL INSPECTION IS REQUIRED FOR ALL SHOP FABRICATED MEMBERS OR ASSEMBLIES UNLESS WAIVED PER THE EXCEPTIONS IN CBC SECTION 1704A.2.5.
- 11. DEFINITIONS: A. CONTINUOUS - SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS CONTINUOUSLY PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED. B. PERIODIC - SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.

C. QUALITY ASSURANCE (QA) - MONITORING AND INSPECTION TASKS PERFORMED BY AN

THE REQUIREMENTS OF THE APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. QUALITY ASSURANCE INCLUDES THOSE TASKS DESIGNATED 'SPECIAL INSPECTION' BY THE APPLICABLE CODE. D. QUALITY CONTROL (QC) - CONTROLS AND INSPECTIONS IMPLEMENTED BY THE FABRICATOR OR ERECTOR, AS APPLICABLE, TO ENSURE THAT THE MATERIAL PROVIDED

AGENCY OR FIRM OTHER THAN THE FABRICATOR OR ERECTOR TO ENSURE THAT THE MATERIAL PROVIDED AND WORK PERFORMED BY THE FABRICATOR AND ERECTOR MEET

- AND WORK PERFORMED MEET THE REQUIREMENTS OF THE APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. E. OBSERVE (O) - OBSERVE THESE ITEMS ON A RANDOM BASIS (DAILY FOR LFRS).
- OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. PERFORM (P) - PERFORM THOSE TASKS PRIOR TO FINAL ACCEPTANCE FOR EACH ITEM OR G. DOCUMENT (D) - THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE REPORT
- NEED NOT PROVIDE DETAILED MEASUREMENTS FOR JOINT FIT-UP, WPS SETTINGS, COMPLETED WELDS, OR OTHER INDIVIDUAL ITEMS LISTED IN THE TABLES. FOR SHOP FABRICATION, THE REPORT SHALL INDICATE THE PIECE MARK OF THE PIECE INSPECTED. FOR FIELD WORK, THE REPORT SHALL INDICATE THE REFERENCE GRID LINES AND FLOOR OR ELEVATION INSPECTED. WORK NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND WHETHER THE NONCOMPLIANCE HAS BEEN SATISFACTORILY REPAIRED SHALL BE NOTED IN THE INSPECTION REPORT.
- 12. SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED DURING CONSTRUCTION ON THE WORK SHOWN IN THE CONSTRUCTION DOCUMENTS AS REQUIRED BY CBC CHAPTER 17A, THE TABLES LISTED BELOW, AND THE JURISDICTION'S SPECIAL INSPECTION AND TESTING FORM. IF DISCREPANCIES ARE NOTED, CONTACT THE SEOR. ALL EXCEPTIONS INCLUDED IN CBC CHAPTER 17A ARE PERMITTED TO BE USED. CONCRETE CONSTRUCTION
 - MASONRY CONSTRUCTION LEVEL 3 (POST-INSTALLED ANCHORS) STEEL CONSTRUCTION

CE	DNCRETE CONSTRUCTION - REQUIRED BC TABLE 1705A.3	SPECIAL INSPEC	CTIONS AND T	<u>ESTS</u>
, 10	TYPE	CONTINUOUS	PERIODIC	REFERENCED STANDARD®
1.	INSPECT AND TEST REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.			ACI 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3, 26.13.1, 26.13.3.2, 26.13.3.3
	A. REINFORCEMENT IN SPECIAL MOMENT FRAMES, BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS AND COUPLING BEAMS.	Х	-	
	B. ALL OTHER REINFORCEMENT	-	Х	
2.	REINFORCING BAR WELDING:			AWS D1.4 - ACI 318: 18.2.8, 25.5.7,
	A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	-	X	26.6.4, 26.13.1.4, 26.13.3.2, 26.13.3.3
	B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; NOT DEFINED IN 2.D OR 2.E	-	Х	
	C. INSPECT ALL OTHER WELDS			
	D. REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS AND COUPLING BEAMS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	X	-	
2	E. SHEAR REINFORCEMENT.	X	- ~	ACI 249: 47 9 2 26 7 2
3.4.	INSPECT AND TEST ANCHORS POST-	-	X	ACI 318: 17.8.2, 26.7.2, 26.8.2, 26.13.1, 26.13.3.3
	INSTALLED IN HARDENED CONCRETE MEMBERS. b			
	A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	Х	-	ACI 318: 17.8.2.4, 26.7.2, 26.13.1, 26.13.3.2
	B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.	-	Х	ACI 318: 17.8.2, 26.7.2, 26.13.1, 26.13.3.3
5.	VERIFY USE OF REQUIRED DESIGN MIX.	Х	-	ACI 318: CH. 19, 26.4, 26.13.3.2
6.	PRIOR TO AND DURING CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	Х	-	ASTM C172 ASTM C31 ACI 318: 26.4, 26.5, 26.12
7.	INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	Х	-	ACI 318: 26.5, 26.13 ACI 506: 3.4
8.	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	Х	ACI 318: 26.5.3-26.5.5, 26.13.3.3
9.	INSPECT PRESTRESSED CONCRETE FOR:			ACI 318: 26.10.2, 26.13.1, 26.13.3.2
	A. APPLICATION OF PRESTRESSING FORCES	Х	-	
	B. GROUTING OF BONDED PRESTRESSING TENDONS.	Х	-	
10.	INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	-	Х	ACI 318: Ch. 26.9, 26.13.1, 26.13.3.3
11.	FOR PRECAST CONCRETE DIAPHRAGM CONNECTIONS OR REINFORCEMENT AT JOINTS CLASSIFIED AS MODERATE OR HIGH DEFORMABILITY ELEMENTS (MDE OR HDE) IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E OR F, INSPECT SUCH CONNECTIONS AND REINFORCEMENT IN THE FIELD FOR:			ACI 318: 26.13.1.3 ACI 550.5
	A. INSTALLATION OF THE EMBEDDED PARTS.	Х	-	
	B. COMPLETION OF THE CONTINUITY OF REINFORCEMENT ACROSS JOINTS.	Х	-	
	C. COMPLETION OF CONNECTIONS IN THE FIELD.	Х	-	
12.	INSPECT INSTALLATION TOLERANCES OF PRECAST CONCRETE DIAPHRAGM CONNECTIONS FOR COMPLIANCE WITH ACI 550.5.	-	X	ACI 318: 26.13.1.3
13.	VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X	ACI 318: 26.10.2, 26.11.2, 26.13.3.3
14.	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	Х	ACI 318: 26.11.1.2(b), 26.13.3.3
15.	BATCH PLANT - QUALITY AND QUANTITY OF MATERIALS USED IN TRANSIT-MIXED CONCRETE AND BATCHED AGGREGATES, AT LOCATION WHERE MATERIALS ARE MEASURED. d	Х	-	
16	CONCRETE PREPLACEMENT INSPECT	ION CONCRETE	SHALL NOT F	DE DI ACED LINTII THE

- 16. CONCRETE PREPLACEMENT INSPECTION CONCRETE SHALL NOT BE PLACED UNTIL THE FORMS AND REINFORCEMENT HAVE BEEN INSPECTED, ALL PREPARATIONS FOR THE PLACEMENT HAVE BEEN COMPLETED, AND THE PREPARATIONS HAVE BEEN CHECKED BY THE INSPECTOR OF RECORD.
- 7. PLACING RECORD A RECORD SHALL BE KEPT ON THE SITE OF THE TIME AND DATE OF PLACING THE CONCRETE IN EACH PORTION OF THE STRUCTURE. SUCH RECORD SHALL BE KEPT UNTIL THE COMPLETION OF THE STRUCTURE AND SHALL BE OPEN TO THE INSPECTION OF THE ENFORCEMENT AGENCY. 18. COMPOSITE CONSTRUCTION CORES - COMPOSITE CONSTRUCTION CORES SHALL BE TAKEN
- AND TESTED IN ACCORDANCE WITH CBC SECTION 1910A.4 A. WHERE APPLICABLE, SEE ALSO SECTION 1705.13, SPECIAL INSPECTIONS FOR SEISMIC
- B. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO COMMENCEMENT OF THE WORK.
- C. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO COMMENCEMENT OF THE WORK.
- D. SEE 1705A.3.3 FOR WAIVER/EXCEPTIONS.

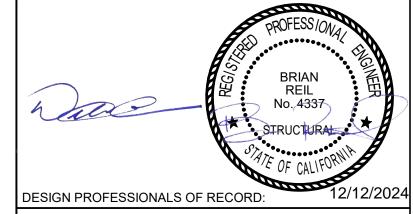
MASONRY CONSTRUCTION - POST-INSTALLED ANCHORS - LEVEL 3 REQUIRED SPECIAL INSPECTIONS AND TESTS TMS 602 TABLE 3 AND 4 110TN405					
	INSPECTION TASK	FREQU	ENCY	REFERENCE FOR CRITERIA	
INSPECTION TASK		CONTINUOUS	PERIODIC	REI ERENGET OR GRITERIA	
1.	VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION:				
	A. TYPE, SIZE, AND LOCATION OF POST-INSTALLED ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	X	-	ICC/IAPMO REPORT	

		TYPE	CONTINUOUS	PERIODIC	REFERENCED STANDAR
1	. MA	TERIAL IDENTIFICATION AND TESTI			
	C S	DENTIFICATION MARKINGS TO ONFORM TO ASTM STANDARDS PECIFIED IN THE APPROVED ONSTRUCTION DOCUMENTS	-	Х	RCSC: 1.5, AISC 360: SECTION A3.3, J3.1 AND APPLICABLE ASTM MATERIAL STANDARDS
		IANUFACTURER'S CERTIFICATE F COMPLIANCE REQUIRED	-	Х	RCSC: 1.5 & 2.1, AISC 360: A3.3 & N3.2
		ESTING OF HIGH-STRENGTH OLTS, NUTS AND WASHERS	-	-	RCSC: 7.2, APPLICABLE ASTM MATERIAL STANDARDS
2	. INSI	PECTION OF HIGH-STRENGTH BOL	TING		
	A. S	NUG-TIGHT JOINTS	-	Х	
	C N O IN	RETENSIONED AND SLIP- RITICAL JOINTS USING TURN-OF- UT WITH MATCHMARKING, TWIST- FF BOLT OR DIRECT TENSION IDICATOR METHODS OF ISTALLATION	-	X	RCSC: 7-9, AISC 360: J3.1, J3.2, M2.5 & N5.6
	O N	RETENSIONED AND SLIP- RITICAL JOINTS USING TURN-OF- UT WITHOUT MATCHMARKING, PR CALIBRATED WRENCH JETHODS OF INSTALLATION	X	-	
3		FERIAL IDENTIFICATION AND TESTI EL DECK	NG OF STRUCTU	JRAL STEEL AN	D COLD-FORMED
	A. F	OR STRUCTURAL STEEL, DENTIFICATION MARKINGS TO ONFORM TO AISC 360	-	Х	AISC 360, SECTION A3.
	II C S	OR OTHER STEEL, DENTIFICATION MARKINGS TO ONFORM TO ASTM STANDARDS PECIFIED IN THE APPROVED ONSTRUCTION DOCUMENT	-	X	APPLICABLE ASTM MATERIAL STANDARDS
	_	IANUFACTURER'S CERTIFIED EST REPORTS	-	Х	AISC 360: A3.1 & N3.2
	D. T	ESTING OF UNIDENTIFIED STEEL	-	-	APPLICABLE ASTM MATERIAL STANDARDS
4	. MA T	FERIAL IDENTIFICATION OF WELDIN	IG CONSUMABL	ES AND TESTIN	G OF WELDED ELEMENT:
	Д ІГ		_	Х	AISC 360, A3.5 & N3.2 AN
	C S	DENTIFICATION MARKINGS TO ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS		^	APPLICABLE AWS A5 DOCUMENTS
	S C B. M	ONFORM TO AWS PECIFICATION IN THE APPROVED	-	X	APPLICABLE AWS A5
	B. M C	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE	-		APPLICABLE AWS A5 DOCUMENTS
5	B. M C	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED ONDESTRUCTIVE TESTING OF	-		APPLICABLE AWS A5 DOCUMENTS AISC 360: N3.2
5	B. M C C. N W	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED ONDESTRUCTIVE TESTING OF VELDED JOINTS	-	X -	APPLICABLE AWS A5 DOCUMENTS AISC 360: N3.2
5	B. M C C. N W . INSI	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED ONDESTRUCTIVE TESTING OF VELDED JOINTS PECTION OF WELDING	- RMED STEEL DE	X -	APPLICABLE AWS A5 DOCUMENTS AISC 360: N3.2
5	B. M C C. N W INSI A. S	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE IF COMPLIANCE REQUIRED ONDESTRUCTIVE TESTING OF IELDED JOINTS PECTION OF WELDING TRUCTURAL STEEL AND COLD-FOR	- RMED STEEL DE	X -	APPLICABLE AWS A5 DOCUMENTS AISC 360: N3.2
5	B. M C C. N W INSI A. S a.	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED ONDESTRUCTIVE TESTING OF VELDED JOINTS PECTION OF WELDING TRUCTURAL STEEL AND COLD-FOR	RMED STEEL DE	X -	APPLICABLE AWS A5 DOCUMENTS AISC 360: N3.2 AISC 360: N5.5 AISC 360: J2, M2.4, & M4.5
5	B. M C C. N W . INSI A. S a.	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED ONDESTRUCTIVE TESTING OF VELDED JOINTS PECTION OF WELDING TRUCTURAL STEEL AND COLD-FOR COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS MULTIPASS FILLET WELDS SINGLE-PASS FILLET	RMED STEEL DE	X -	APPLICABLE AWS A5 DOCUMENTS AISC 360: N3.2 AISC 360: N5.5
5	B. MCCC. NWA. INSI	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED ONDESTRUCTIVE TESTING OF VELDED JOINTS PECTION OF WELDING TRUCTURAL STEEL AND COLD-FOR COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS MULTIPASS FILLET WELDS SINGLE-PASS FILLET WELDS > 5/16"	- X X X	X -	APPLICABLE AWS A5 DOCUMENTS AISC 360: N3.2 AISC 360: N5.5 AISC 360: J2, M2.4, & M4.5 AWS D1.1
5	B. MCCC. NWA. INSI	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED ONDESTRUCTIVE TESTING OF VELDED JOINTS PECTION OF WELDING TRUCTURAL STEEL AND COLD-FOR COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS MULTIPASS FILLET WELDS SINGLE-PASS FILLET WELDS > 5/16" PLUG AND SLOT WELDS	- RMED STEEL DE X X X X		APPLICABLE AWS A5 DOCUMENTS AISC 360: N3.2 AISC 360: N5.5 AISC 360: J2, M2.4, & M4.5 AWS D1.1
5	B. MCCC. NW. INSI A. S a. b. c. d.	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED ONDESTRUCTIVE TESTING OF VELDED JOINTS PECTION OF WELDING TRUCTURAL STEEL AND COLD-FOI COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS MULTIPASS FILLET WELDS SINGLE-PASS FILLET WELDS ≤ 5/16" PLUG AND SLOT WELDS SINGLE-PASS FILLET WELDS ≤ 5/16"	- RMED STEEL DE X X X X	X X	APPLICABLE AWS A5 DOCUMENTS AISC 360: N3.2 AISC 360: N5.5 AISC 360: J2, M2.4, & M4.5 AWS D1.1 AWS D1.8
5	B. MCCC. NW. INSI A. S a. b. c. d. e.	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED ONDESTRUCTIVE TESTING OF VELDED JOINTS PECTION OF WELDING TRUCTURAL STEEL AND COLD-FOR COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS MULTIPASS FILLET WELDS SINGLE-PASS FILLET WELDS > 5/16" PLUG AND SLOT WELDS SINGLE-PASS FILLET WELDS ≤ 5/16" FLOOR AND ROOF DECK WELDS	- RMED STEEL DE X X X X	X X X	APPLICABLE AWS A5 DOCUMENTS AISC 360: N3.2 AISC 360: N5.5 AISC 360: J2, M2.4, & M4.5 AWS D1.1 AWS D1.8
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	B. MC C. NW . INSI A. S a. b. c. d. e. f. g. h. B. R	ONFORM TO AWS PECIFICATION IN THE APPROVED ONSTRUCTION DOCUMENTS IANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED ONDESTRUCTIVE TESTING OF VELDED JOINTS PECTION OF WELDING TRUCTURAL STEEL AND COLD-FOR COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS MULTIPASS FILLET WELDS SINGLE-PASS FILLET WELDS > 5/16" PLUG AND SLOT WELDS SINGLE-PASS FILLET WELDS ≤ 5/16" FLOOR AND ROOF DECK WELDS END-WELDED STUDS WELDED SHEET STEEL FOR COLD-FORMED FRAMING MEMBERS EINFORCING STEEL	RMED STEEL DE X X X - - - - - - - - -	X X X X X X	APPLICABLE AWS A5 DOCUMENTS AISC 360: N3.2 AISC 360: N5.5 AISC 360: J2, M2.4, & M4.5 AWS D1.1 AWS D1.8 AWS D1.3, SDI QA/QC AWS D1.1
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1.	WHERE APPLICABLE, SEE ALSO SECTI RESISTANCE	ON 1705A.13, SF	PECIAL INSPECT	TIONS FOR SEISMIC	

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DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION:







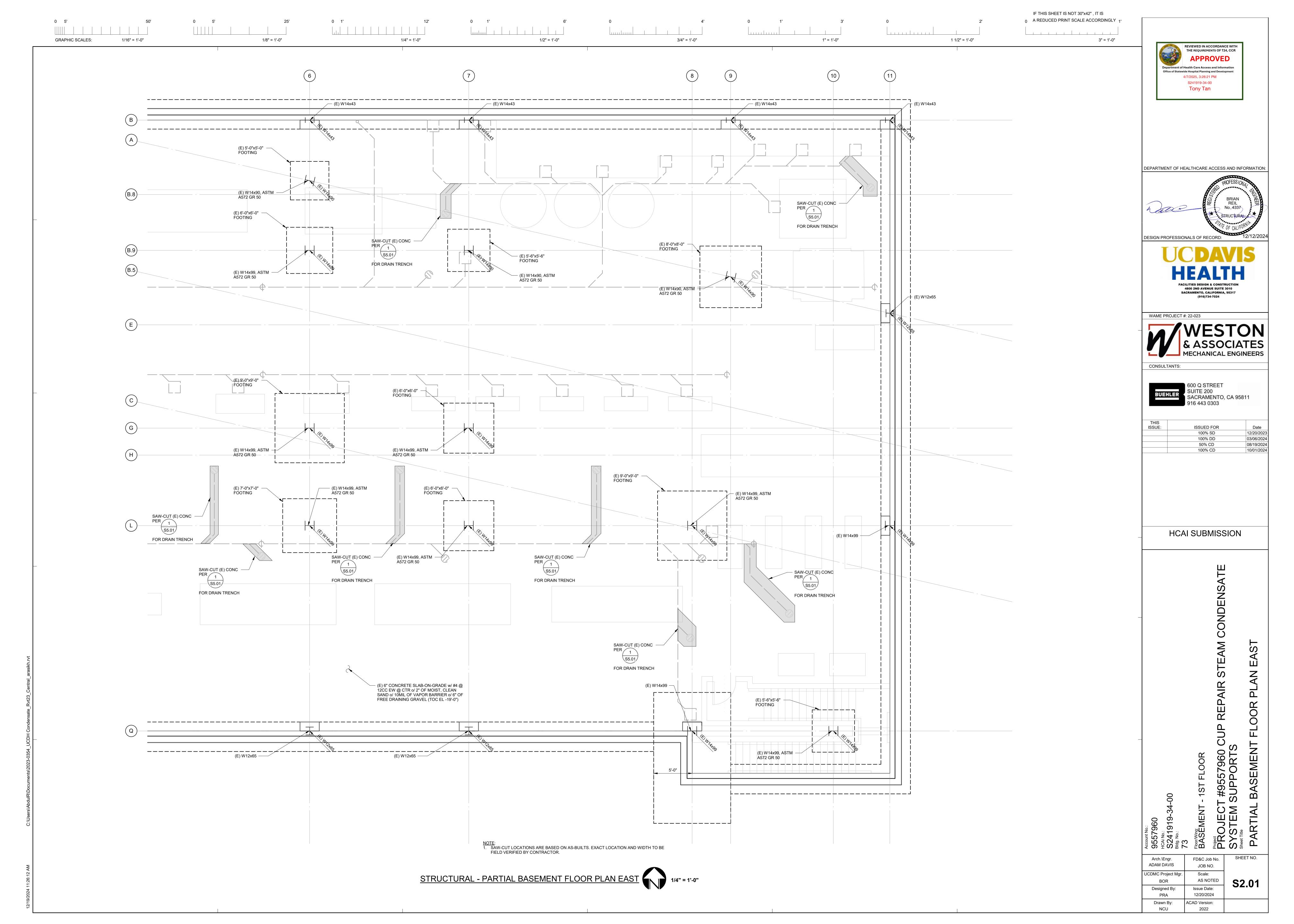
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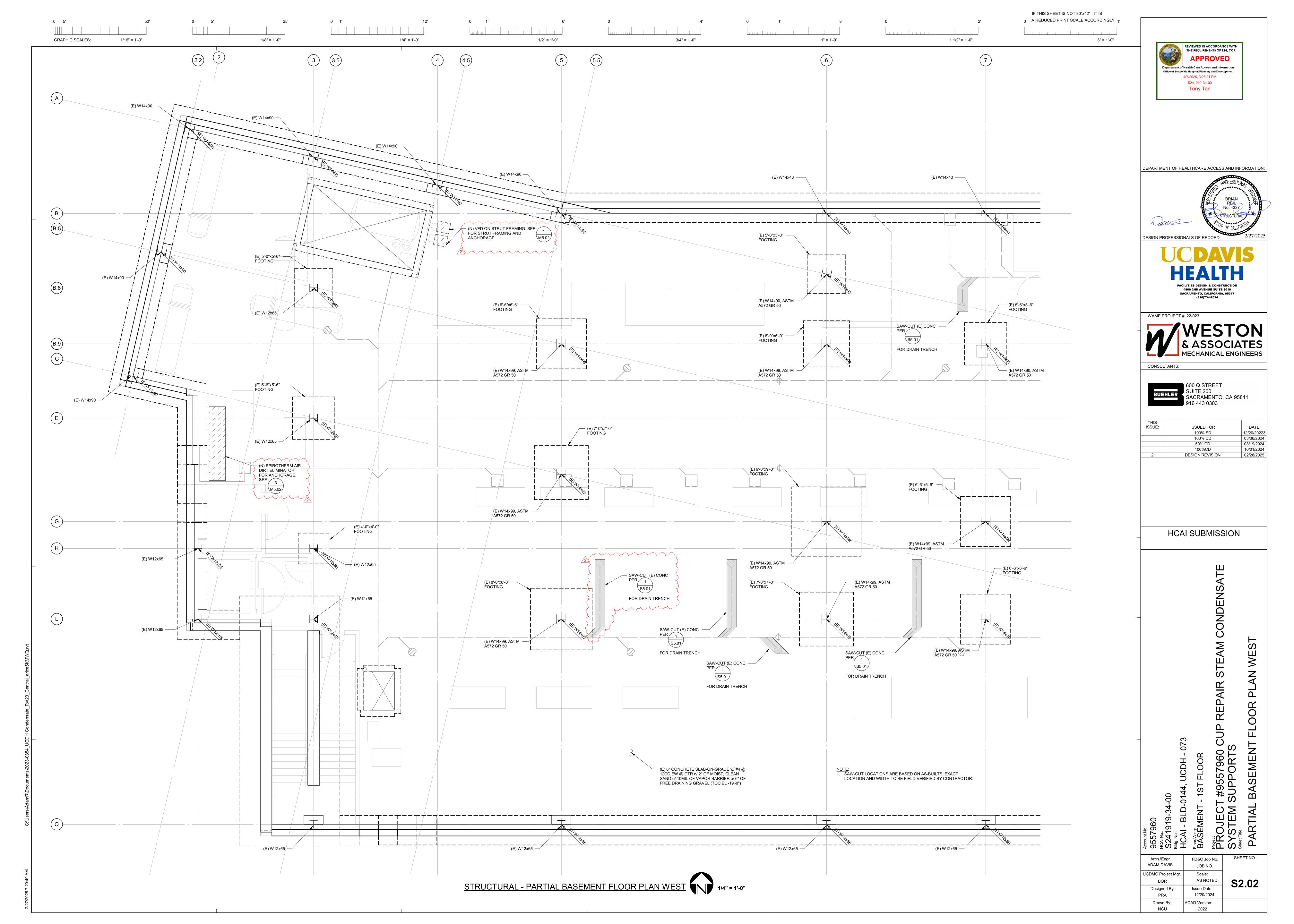


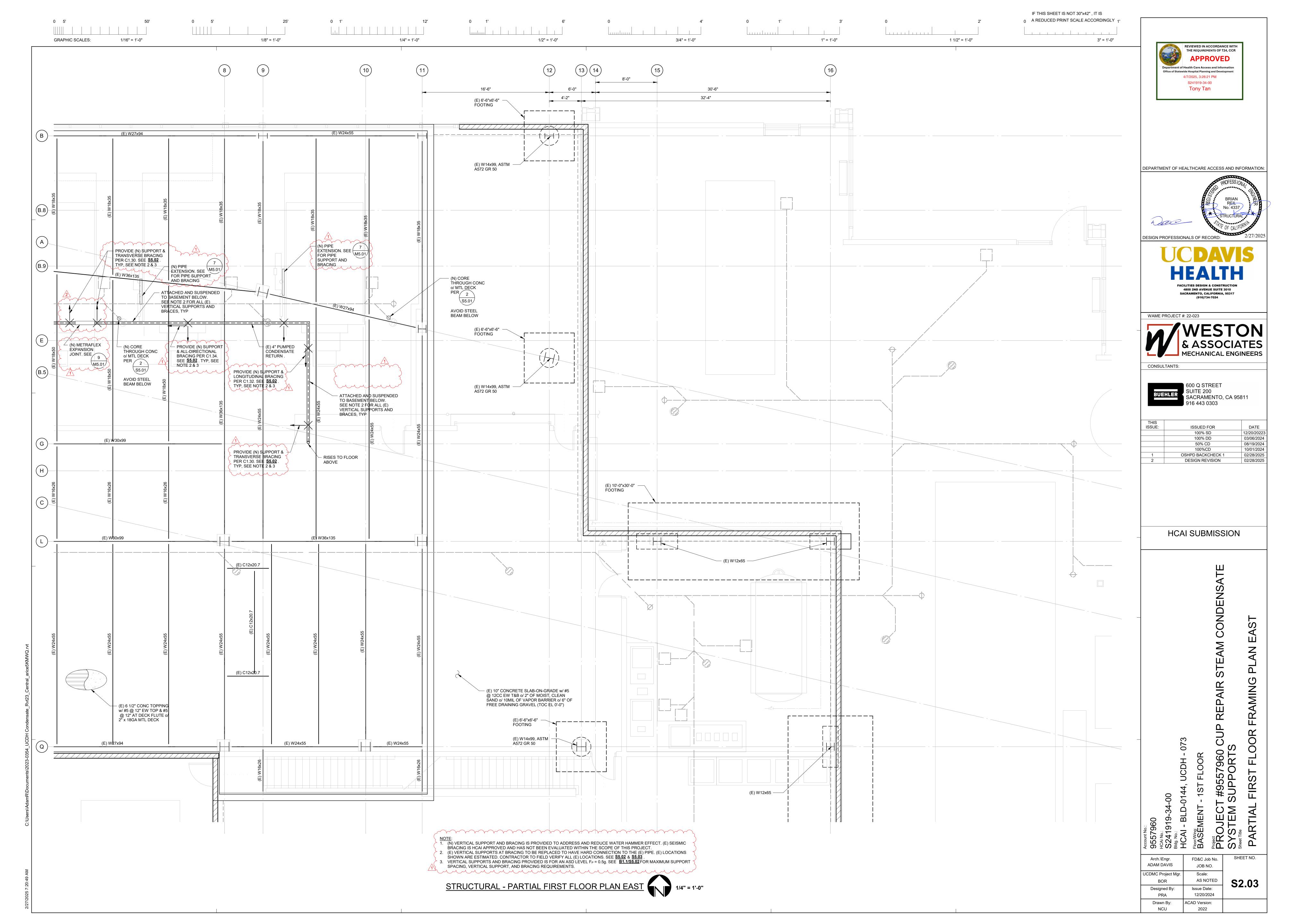
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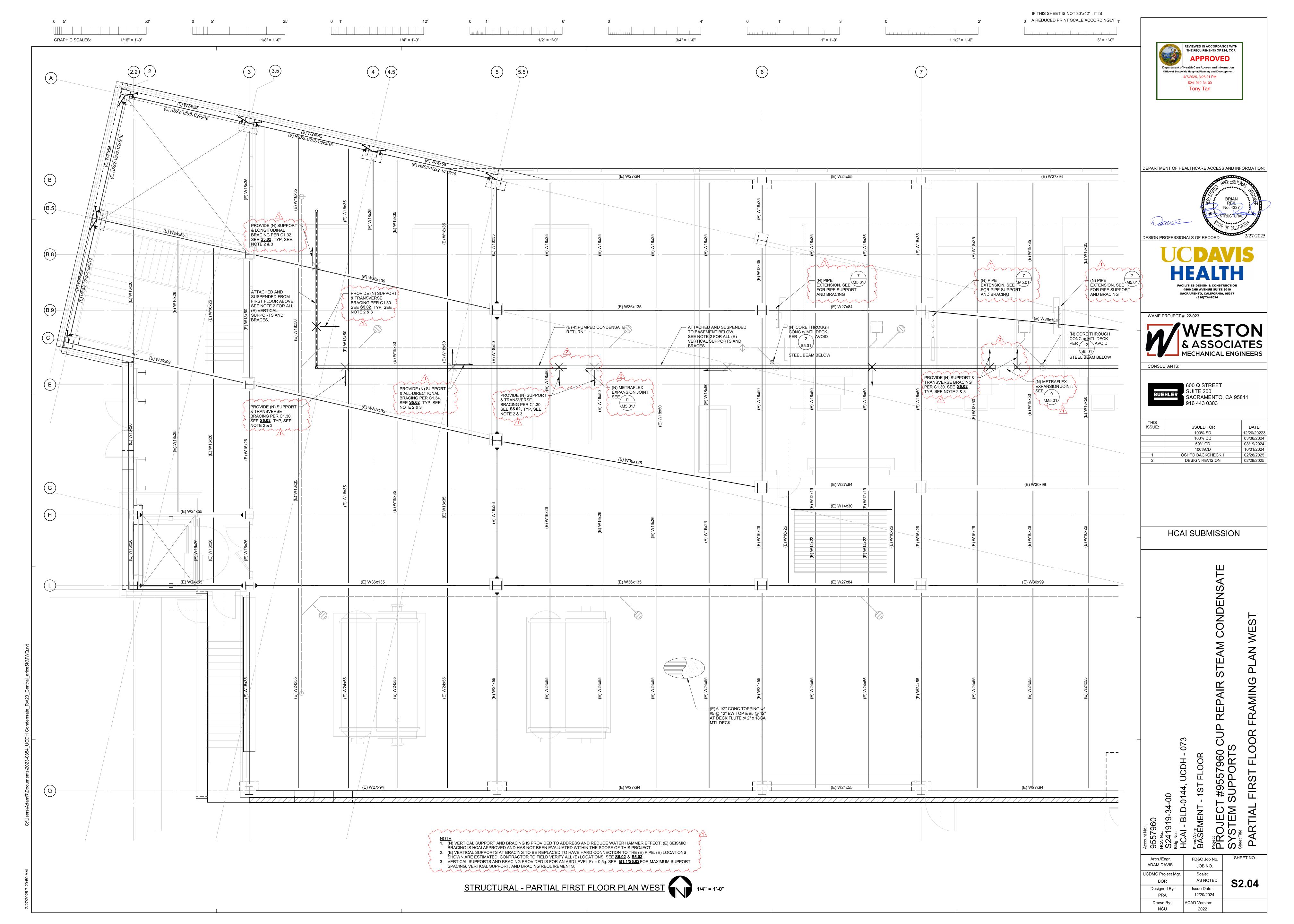
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SHEET NO. Arch.\Engr. FD&C Job No. ADAM DAVIS JOB NO. UCDMC Project Mgr. Scale: BOR AS NOTED Designed By: Issue Date: 12/20/2024 PRA ACAD Version: Drawn By: 2022

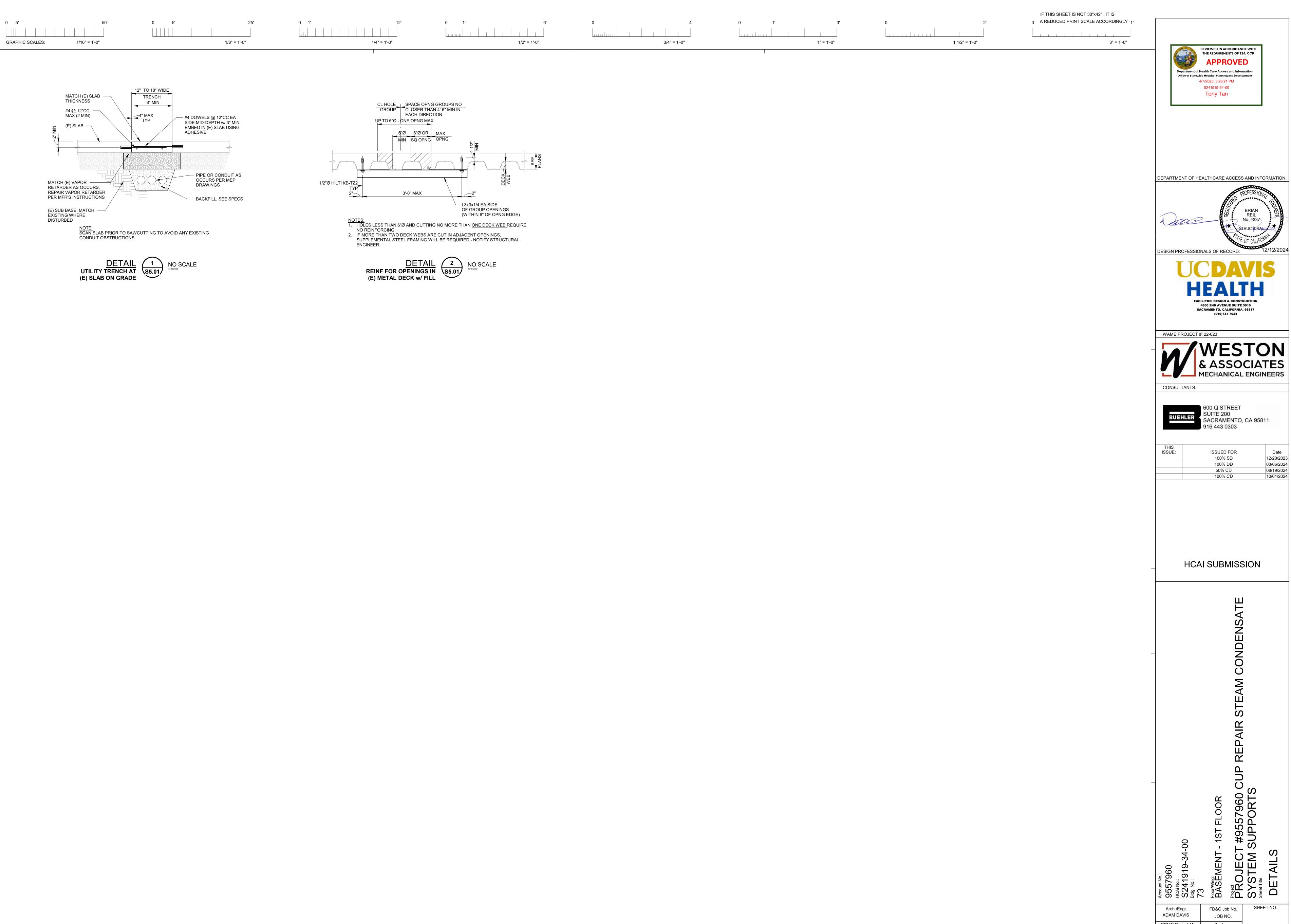








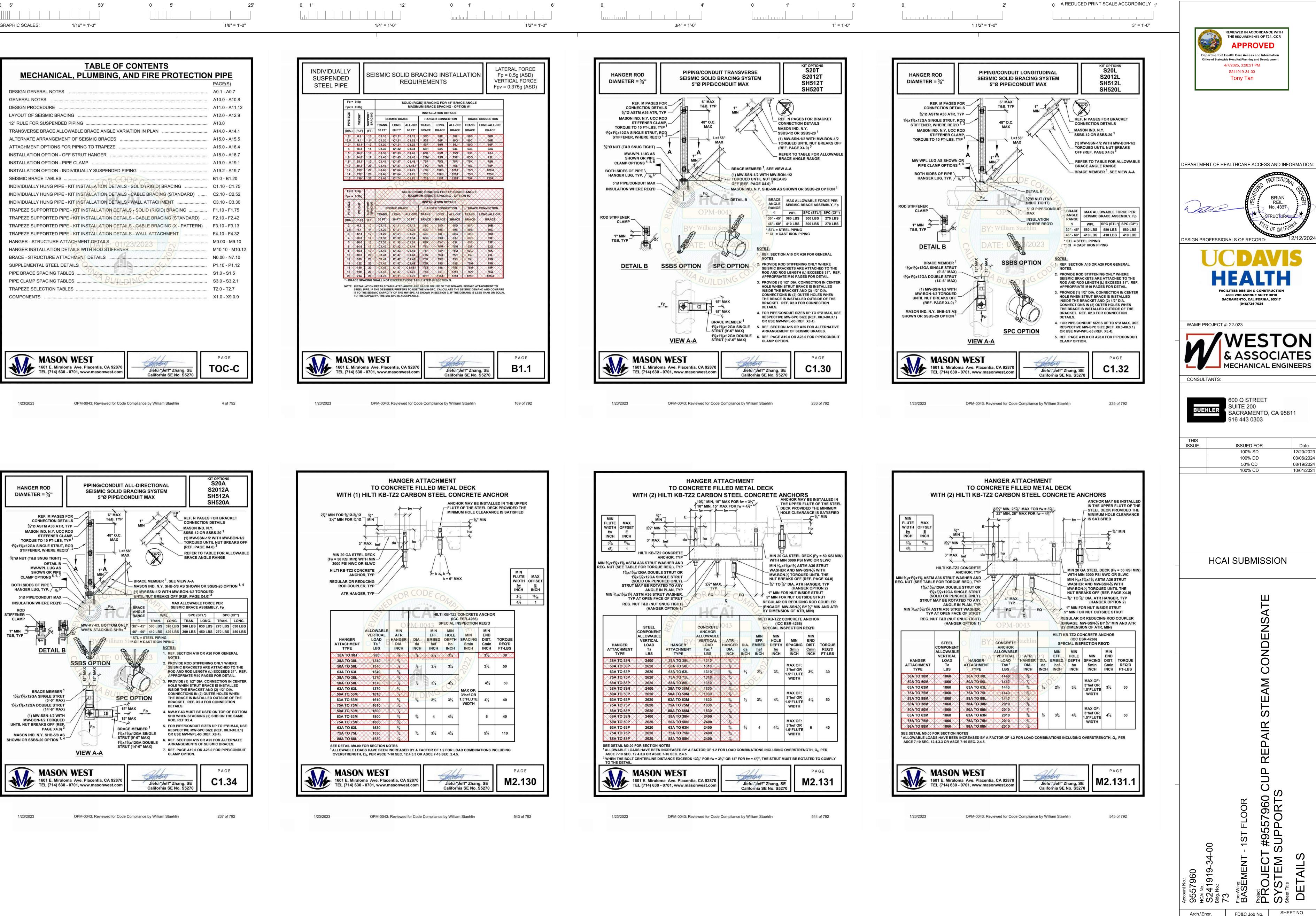




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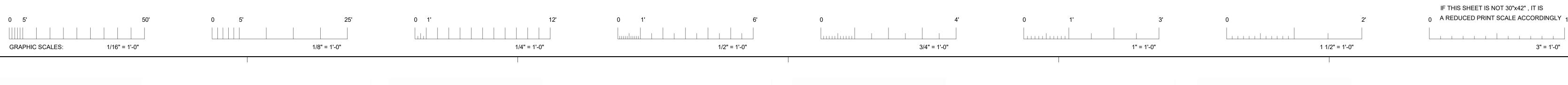
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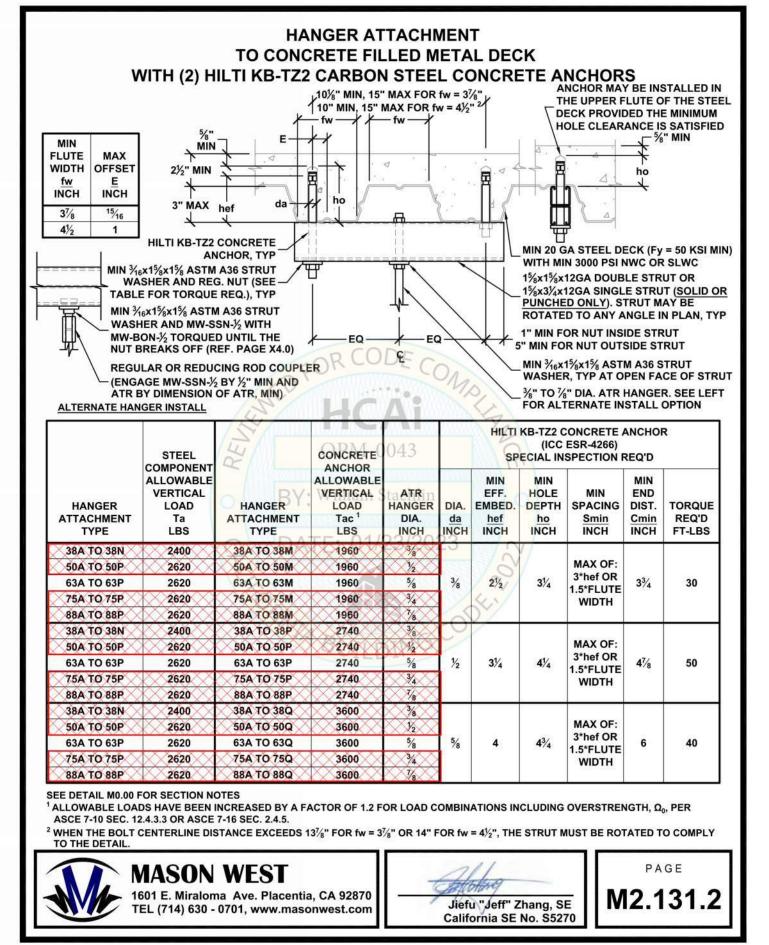


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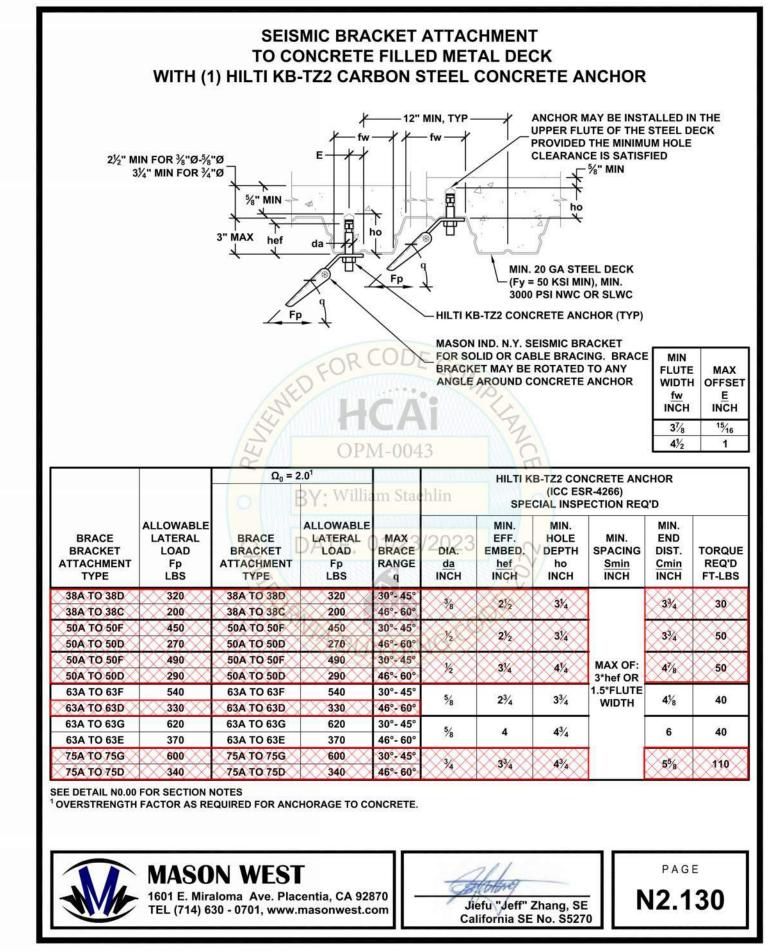
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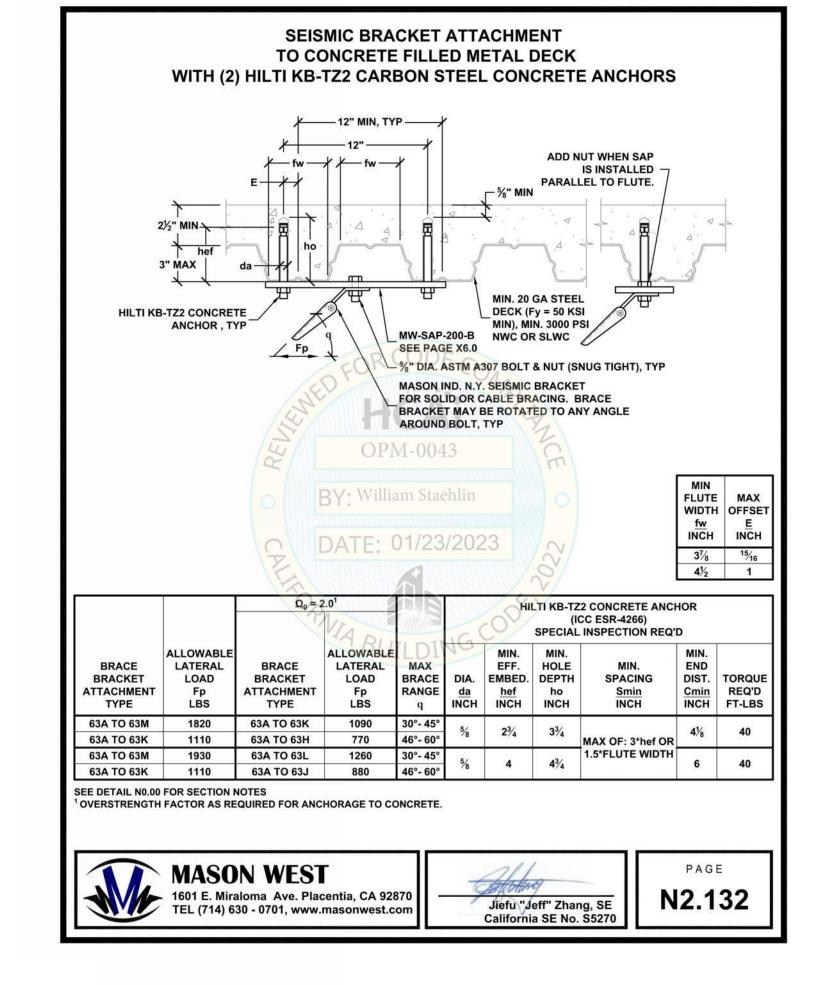




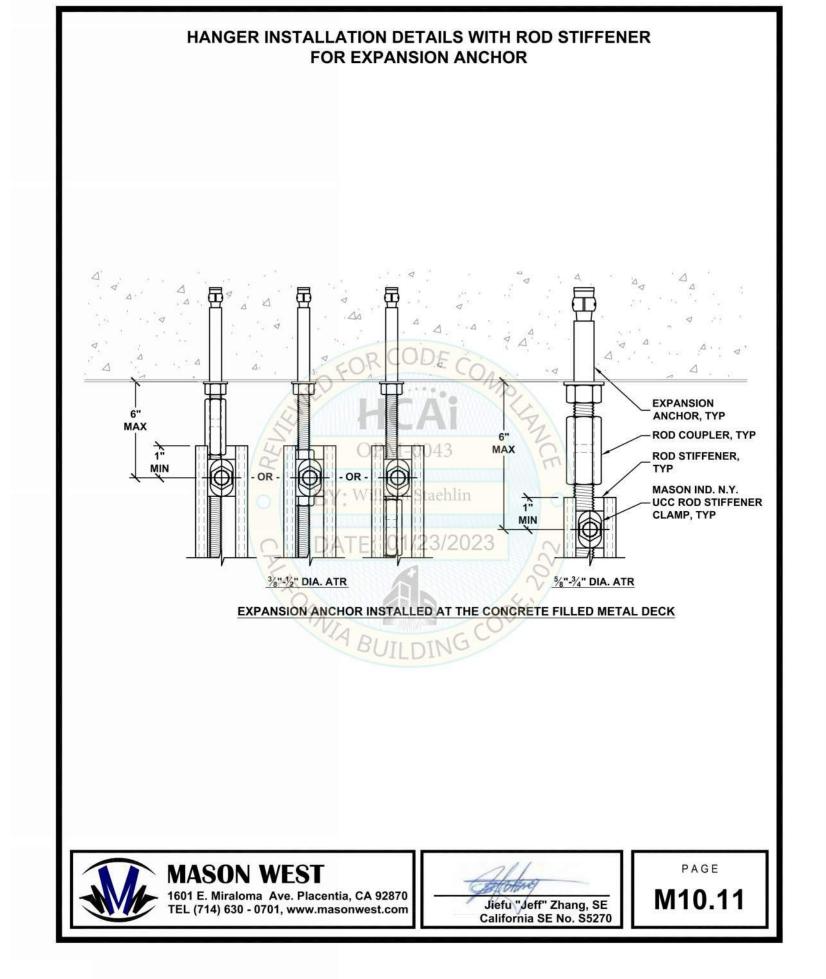
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OPM-0043: Reviewed for Code Compliance by William Staehlin



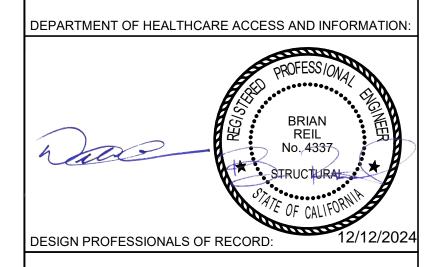
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HCAI SUBMISSION

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10/01/2024

1ST FLOOR #9557960 CUP REPAIR STEAM CONDENSATE UPPORTS
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Arch.\Engr. DAM DAVIS	FD&C Job No. JOB NO.	SHEET NO.
MC Project Mgr. BOR	Scale: AS NOTED	S5.03
Designed By: PRA	Issue Date: 12/20/2024	03.03
Drawn By: NCU	ACAD Version: 2022	

5. EMI/RFI FILTERS EN 61800-3 CE FIRST ENVIRONMENT.

6. DRIVES SHALL BE CAPABLE OF EMBEDDED SERIAL COMMUNICATION PROTOCOLS FOR BACNET, N2, FLN, MODBUS.

7. DRIVES SHALL HAVE A PASS THRU I/0 SHALL OPEN DAMPERS OR VALVES IN THE SYSTEM IF VFD GOES INTO BYPASS MODE TO ALLEVIATE OVER PRESSURIZATION

8. PROVIDE F-267 SERVICE SWITCH SO THAT DRIVES IN NEMA 1 ENCLOSURES MAY BE SEPARATED FROM THE BYPASS FOR DRIVE SERVICE

10. PROVIDE ECLIPSE BYPASS AND INTEGRATE INTO BMS SYSTEM

11. PROVIDE ELECTRICAL WIRING FROM PANEL TO DRIVE AND FROM DRIVE TO EQUIPMENT RECONNECT TO (E) ELECTRICAL WIRING

12. BOILER FEED WATER PUMP VFD'S ARE LOCATED IN HIGH TEMPERATURE SPACE. PROVIDE A DE-RATED DRIVE TO ACCOMMODATE 120F OPERATING CONDITIONS.

13. REPLACE (E) PUMP MOTORS WITH NEW MOTORS COMPATIBLE WITH VARIABLE FREQUENCY DRIVES.

APPLICABLE CODES

ALL WORK PERFORMED UNDER THIS CONTRACT IS TO CONFIRM

CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS,

THE ABOVE CODES AND REGULATIONS REFER TO THE LATEST

CONTRACT, UNLESS OTHERWISE STATED. NOTHING ON THE

DRAWINGS IS TO BE CONSTRUED AS REQUIRING OR PERMITTING

REGULATIONS, OR OTHER LOCAL, STATE OR FEDERAL CODES

EDITION OR REVISION IF FORCE ON THE DATE OF THE

WORK THAT IS CONTRARY TO THE LISTED CODES AND

OR REGULATIONS WHICH MAY BE APPLICABLE.

CALIFORNIA CODE OF REGULATIONS - TITLE 24

TO THE FOLLOWING CODES AND REGULATIONS:

CALIFORNIA BUILDING CODE, 2022 CALIFORNIA MECHANICAL CODE, 2022

CALIFORNIA PLUMBING CODE, 2022

CALIFORNIA ELECTRICAL CODE, 2022

CALIFORNIA FIRE CODE, 2022

9. PROVIDE SHAFT GROUNDING KIT ON MOTOR PROVIDE EMS WIRING TO TEMPERATURE CONTROL PANEL

CONTROLS GENERAL NOTES

CONTRACTOR SHALL WORK CLOSELY WITH THE CUP ENGINEERING GROUP FOR CONNECTING OF THE CONTROL POINTS AND INTEGRATION INTO THE EXISTING DCS.

STEAM FLOW METER SCHEDULE							
UNIT	LOCATION	"ARMSTRONG" MODEL	MINIMUM TURNDOWN	MAXIMUM FLOW	WORKING TEMP	WORKING PRESSURE	
STM-FM	LPS TO DA TANK	6" VERIS ACCELABAR	10:1	8,000 LBS/HR	241 °F	14 PSI	24V DC

- TRANSMITTER HEAD SHALL BE A LOOP POWERED ROSEMOUNT TYPE.
- TRANSMITTER HEAD TO BE INSTALLED HORIZONTAL ON THE BOTTOM OF THE PIPE. PROVIDE SUFFICIENT CLEARANCE FOR REMOVAL AND MANUFACTURER'S PUBLISHED LITERATURE INDICATES NO STRAIGHT RUN REQUIREMENTS FOR FLOW METER.
- TERMINATE THE FLOW METER TRANSMITTER AT PCU7 (FIRST FLOOR). TERMINATION UNIT LOCATION 7-9C, CHANNELS 7-15. PROVIDE 3 WIRE

BID ALTERNATE 1

BASE BID:

NO MODIFICATIONS TO COMBINED DA TANK VENT AND CONDENSATE RETURN CONNECTION

BID ALTERNATE 1:

CURRENTLY THE (E) PIPING CONFIGURATION IS A COMBINED PUMPED CONDENSATE RETURN AND DA TANK VENT TO ATMOSPHERE. BID ALTERNATE 1 WOULD BE TO SEPARATE THE VENT AND PUMPED CONDENSATE RETURN. PUMPED CONDENSATE RETURN WILL REMAIN IN THE SAME LOCATION, THE CONTRACTOR WILL OFFSET THE DA TANK VENT AND WILL CONNECT TO AN (E) CAPPED PIPING CONNECTION ON THE DA TANK.

GENERAL NOTES

- MECHANICAL AND PLUMBING DETAILS APPLY TO ALL BUILDINGS WHETHER REFERENCED OR NOT.
- CONTRACTOR TO OFFSET AND PIPING AROUND EXISTING CONDITIONS.
- DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO SHOW EVERY OFFSET, FITTING, OR STRUCTURAL DIFFICULTY THAT MAY BE ENCOUNTERED DURING INSTALLATION OF WORK. THE CONTRACTORS SHALL COORDINATE LOCATION OF ALL DUCTWORK AND PIPING WITH ALL OTHER TRADES ON THIS PROJECT. LOCATION OF ALL ITEMS NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. EXACT LOCATIONS NECESSARY TO SECURE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT THE JOB SITE AND SHALL HAVE THE APPROVAL OF THE ARCHITECT BEFORE BEING INSTALLED.
- ALL VALVES SHALL BE FULL LINE SIZES UNLESS NOTED OTHERWISE.
- PIPING SHALL BE SUPPORTED IN ACCORDANCE TO OPM-0043-13 BY MASON WEST, BLINE OPM-0052-13 OR EQUAL. ALL METAL STRUT SYSTEMS SHALL BE OF A SINGLE MANUFACTURER AND SHALL BE IN ACCORDANCE WITH MASON WEST OPM-0043-13, BLINE OPM-0052-13 OR
- THE INTENT OF THE CONSTRUCTION DOCUMENTS IS TO RECONSTRUCT THE HOSPITAL BUILDING IN ACCORDANCE WITH THE 2016 CBSC. SHOULD ANY CONDITION DEVELOP NOT COVERED BY THE APPROVED CONSTRUCTION DOCUMENTS, WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH THE 2016 CBSC, AMENDED CONSTRUCTION DOCUMENTS (ACDS) DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY OSHPD BEFORE PROCEEDING WITH THE

STEAM CONDENSATE FLOW METER SCHEDULE

UNIT	LOCATION	"ROSEMOUNT" MODEL	MINIMUM FLOW	MAXIMUM FLOW	WORKING TEMP	WORKING PRESSURE	
COND-FM	CONDENSATE RETURN FROM CAMPUS		1 GPM	20 GPM	200 °F	14 PSI	24V DC

. TERMINATE THE FLOW METER TRANSMITTER AT PCU8 IN BASEMENT LEVEL. TERMINATION UNIT LOCAITON 8B-11D. SPARE CHANNELS 13,15, & 16. PROVIDE 16 AWG SHIELDED TWISTED PAIR WIRE WITH A DRAIN WIRE.

EQUIPMENT SCHEDULE

	<u>AIR SEPARATOR</u>
AS 1	"SPIROTHERM" MODEL VDT-1200-FA12" FLANGED PIPING CONNECTIONS, FLANGED DRAIN. 2000 GPM MAX FLOW, 12" FLANGED CONNECTIONS, 1" FLANGED DRAIN, 2000 GPM DESIGN FLOW, 4.5 FT PRESSURE DROP, SEE MOUNTING DETAIL 3/M5.02
	OPERATING WEIGHT = 1250 LBS.

CONTROL NOTES

"METRAFLEX" METRAGATOR GAT3004SF0400 300 PSI 4" AXIAL COMPRESSION, FLANGED EXTERNALLY

BELLOWS, 1/2" DRAIN, 300# RAISED FACE FLANGE CARBON STEEL FLANGES.

PRESSURIZED EXPANSION JOINT. INTERNAL GUIDE RING, LIFTING LUG, MULTIPLY 304 STAINLESS STEEL

CONDENSATE RECEIVER CONTROLS

PROVIDE NEW FLUID GAUGE PLC CONTROL PANEL ADJACENT TO CONDENSATE RECEIVER PUMP VFD'S. PROVIDE NEW ELECTRONIC RADAR LEVEL SENSOR IN CONDENSATE RECEIVER TANK. PLC CONTROLLER SHALL CONTROL PUMP SPEED, LEAD/LAG OF PUMPS, AND ALARM TO THE FACILITY DCS. CONTRACTOR SHALL PROVIDE FULL DCS INTEGRATION, GRAPHICS, ALARMS ETC. SEE 1/M5.03.

STEAM CONDENSATE FLOW METER / STEAM FLOW METER

METRAFLEX EXPANSION JOINT

STEAM CONDENSATE FLOW METER SHALL BE PROVIDED FOR THE CONDENSATE RETURN FROM THE CAMPUS BACK TO THE CENTRAL UTILITY PLAN. THE FLOW METER SHALL BE INTEGRATED AND MONITORED BY THE FACILITY DCS. THE DCS SHALL TREND CONDENSATE FLOW FOR EACH OF THE FLOW METERS.

BOILER GAS FLOW METERS

GAS FLOW METERS SHALL BE INTEGRATED INTO THE CLEAVER BROOKS BOILER CONTROLLER AND MONITORED BY THE FACILITY DCS. INTEGRATION INTO THE BOILER CONTROLLER SHALL BE BY RF MACDONALD. THE DCS SHALL TREND DAILY (ADJUSTABLE) GAS USAGE FOR EACH OF THE FLOW METERS AND STORE DATA FOR A PERIOD OF 5 YEARS (ADJ).

THE CONTRACTOR SHALL RECONFIGURE THE GAS PIPING SUCH THAT THERE IS 20" OF STRAIGHT PIPING AHEAD AND BEHIND THE NEW FLOW METER SPOOL ASSEMBLY.

PROVIDE THE FOLLOWING:

INSERTION METER: P/N: SIP-05-15-AC115-NG / SVA05

ISOLATION VALVE (3/4" MNPT):

P/N: SVA05 SPECIAL (SPECL) INLINE FLOW BODY:

P/N: 400-S150FLG400-SPECL = SPECL: 4" D X 12" L INLINE FLOW BODY, 150# RF FLANGED ENDS, BUILT-IN FLOW CONDITIONING, 3/4" FNPT CONNECTION FOR SVA05

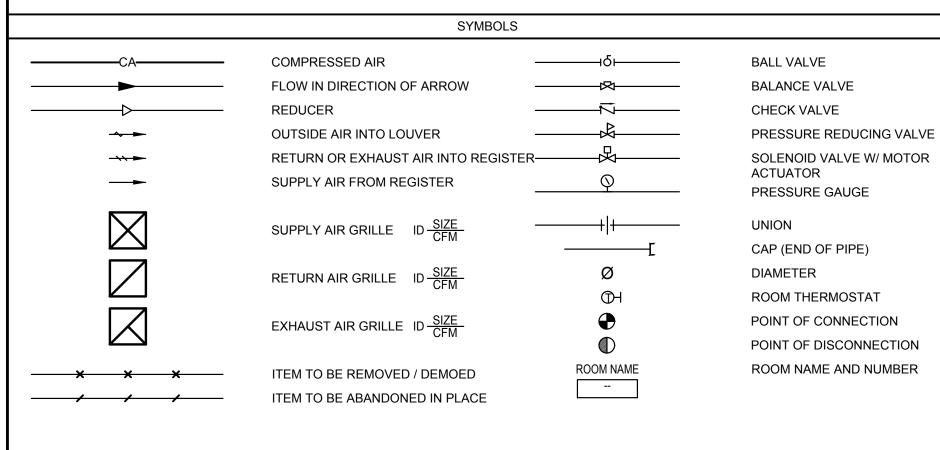
MECHANICAL/PLUMBING LEGEND

1 1/2" = 1'-0"

IF THIS SHEET IS NOT 30"x42", IT IS A REDUCED PRINT SCALE ACCORDINGLY

3" = 1'-0"

			ABBREVIATIONS		
ABC	ABOVE FINISHED CEILING	FLR	FLOOR	ОС	ON CENTER
AC	AIR CONDITIONING	FPM	FEET PER MINUTE	PC	PUMPED CONDENSATE
ACU	AIR CONDITIONING UNIT	FS	FLOW SWITCH	PD	PRESSURE DROP
AD	ACCESS DOOR	FSD	FIRE SMOKE DAMPER	PF	PRE FILTER
AFF	ABOVE FINISHED FLOOR	FT	FEET	PH	PHASE
AFC	ABOVE FINISHED CEILING	GA	GAUGE	PLBG	PLUMBING
AHU	AIR HANDLING UNIT	GC	GENERAL CONTRACTOR	POC	POINT OF CONNECTION
AP	ACCESS PANEL	GALV	GALVANIZED	POD	POINT OF DISCONNECTION
APD	AIR PRESSURE DROP	GSM	GALVANIZED SHEET METAL	PRV	PRESSURE REDUCING VALVE
AVV	AUTOMATIC AIR VENT	GPH	GALLONS PER HOUR	PS	PRESSURE SWITCH
ARCH	ARCHITECT	GPM	GALLONS PER MINUTE	PSI	POUNDS PER SQUARE INCH
BAS	BUILDING AUTOMATION SYSTEM	GV	GATE VALVE	PSIG	POUNDS PER SQUARE INCH GAUGI
BDD	BACK DRAFT DAMPER	HC	HEATING COIL	R	RISER
3F	BELOW FLOOR	HP	HORSEPOWER	RA	RETURN AIR
BHP	BRAKE HORSEPOWER	HPR	HIGH PRESSURE CONDENSATE	RAD	RETURN AIR DAMPER
BOD	BOTTOM OF DUCT	11111	RETURN	RD	REFRIDGERANT DISCHARGE
BOP	BOTTOM OF PIPE	HPS	HIGH PRESSURE STEAM,	RF	RELIEF FAN
			ABOVE 60 PSIG	RH	RELATIVE HUMIDITY
BTUH	BRITISH THERMAL UNIT PER HOUR	HR	HOUR	RHC	
SV	BUTTERFLY VALVE	HRP	HEAT RECOVERY PUMP	_	REHEAT COIL
A	COMPRESSED AIR	HRR	HEAT RECOVERY RETURN	RL	REFRIDGERANT LIQUID
AP 	CAPACITY	HRS	HEAT RECOVERY SUPPLY	RLA	RUNNING LOAD AMPS
CAV	CONSTANT AIR VOLUME	HVAC	HEATING VENTILATING & AIR	RM	ROOM
C	CENTER TO CENTER		CONDITIONING	RPM	REVOLUTIONS PER MINUTE
D	CONDENSATE DRAIN	HWP	HEATING WATER PUMP	RS	REFRIDGERANT SUCTION
EF	CEILING EXHAUST FAN	HWR	HEATING WATER RETURN	RTS	REFER TO SPECIFICATIONS
FM	CUBIC FEET PER MINUTE	HWS	HEATING WATER SUPPLY	SA	SUPPLY AIR
HWP	CHILLED WATER PUMP	HXR	HEAT EXCHANGER	SCD	SECONDARY CONDENSATE DRAIN
HWR	CHILLED WATER RETURN	ID	INSIDE DIAMETER	SCH	SCHEDULE
CHWS	CHILLED WATER SUPPLY	IN WC	INCHES OF WATER COLUMN	SCR	STEAM CONDENSATE RETURN
CO2	CARBON DIOXIDE	KW	KILOWATTS	SF	SUPPLY FAN
CU	CONDENSING UNIT	KWH	KILOWATT HOUR	SHT	SHEET
CV	CONTROL VALVE	LAT	LEAVING AIR TEMPERATURE	SHWP	SECONDARY HEATING WATER PUM
WP	CONDENSING WATER PUMP	LBS	POUNDS	SM	SHEET METAL
WR	CONDENSING WATER RETURN	LDB	LEAVING DRY BULB	SMS	SHEET METAL SCREW
WS	CONDENSING WATER SUPPLY	LWB	LEAVING WET BULB	SP	STATIC PRESSURE
)	DROP	LP	LOW PRESSURE	SPD	STATIC PRESSURE DROP
В	DRY BULB TEMPERATURE	LPR	LOW PRESSURE CONDENSATE	SQFT	SQUARE FEET
ET	DETAIL		RETURN	SQIN	SQUARE INCHES
NΑ	DIAMETER	LPS	LOW PRESSURE STEAM, 5-15 PSIG	SS	STAINLESS STEEL
)IS	DEIONIZED (PURE) STEAM	LWT	LEAVING WATER TEMPERATURES	TA	TO ABOVE
N	DOWN	LRA	LOCKED ROTOR AMPS	TB	TO BELOW
SD	DUCT SMOKE DETECTER	MAV	MANUAL AIR VENT	TCV	TEMPERATURE CONTROL VALVE
TR	DUCT THRU ROOF	MAX	MAXIMUM	TG	TRANSFER GRILLE
WG	DRAWING	MBH	1,000 BRITISH THERMAL UNITS	TH	THERMOMETER
=)	EXISTING		PER HOUR	TSP	TOTAL STATIC PRESSURE
-, ∃R)	EXISTING RELOCATED	MC	MECHANICAL CONTRACTOR	TSTAT	THERMOSTAT
ΞΑ	EXHAUST AIR	MCC	MOTOR CONTROL CENTER	TYP	TYPICAL
	EXHAUST AIR DAMPER	MD	MANUEL DAMPER	UON	UNLESS OTHERWISE NOTED
EAD		MFR	MANUFACTURER	UG	
AT -	ENTERING AIR TEMPERATURE	MIN	MINIMUM		UNDER GROUND
F	EXHAUST FAN	MISC	MISCELLANEOUS	UF	UNDER FLOOR
LEC	ELECTRICAL	MPR	MEDIUM PRESSURE CONDENSATE	V	VOLTS
ESP	EXTERNAL STATIC PRESSURE		RETURN	VAV	VARIABLE AIR VOLUME
T	EXPANSION TANK	(N)	NEW	VD	VOLUME DAMPER
WT	ENTERING WATER TEMPERATURE	NC	NORMALLY CLOSED	VFD	VARIABLE FREQUENCY DRIVE
F	DEGREES FAHRENHEIT	NFPA	NATIONAL FIRE PROTECTION	VLV	VALVE
A	FROM ABOVE		ASSOCIATION	WB	WET BULB
В	FROM BELOW	NIC	NOT IN CONTRACT	WPD	WATER PRESSURE DROP
C	FLEXIBLE CONNECTION	NO	NORMALLY OPEN	WMS	WIRE MESH SCREEN
CU	FAN COIL UNIT	NTS	NOT TO SCALE	W/	WITH
:D	FIRE DAMPER	NA	NOT APPLICABLE	W/O	WITHOUT
	FINAL FILTER	OA	OUTSIDE AIR	WT	WEIGHT
-⊢					
FF FFU	FAN/FILTER UNIT	OAD	OUTSIDE AIR DAMPER	\$	ON/OFF SWTCH/STARTER





DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION:



CONSULTANTS:

DESIGN PROFESSIONALS OF RECORD:



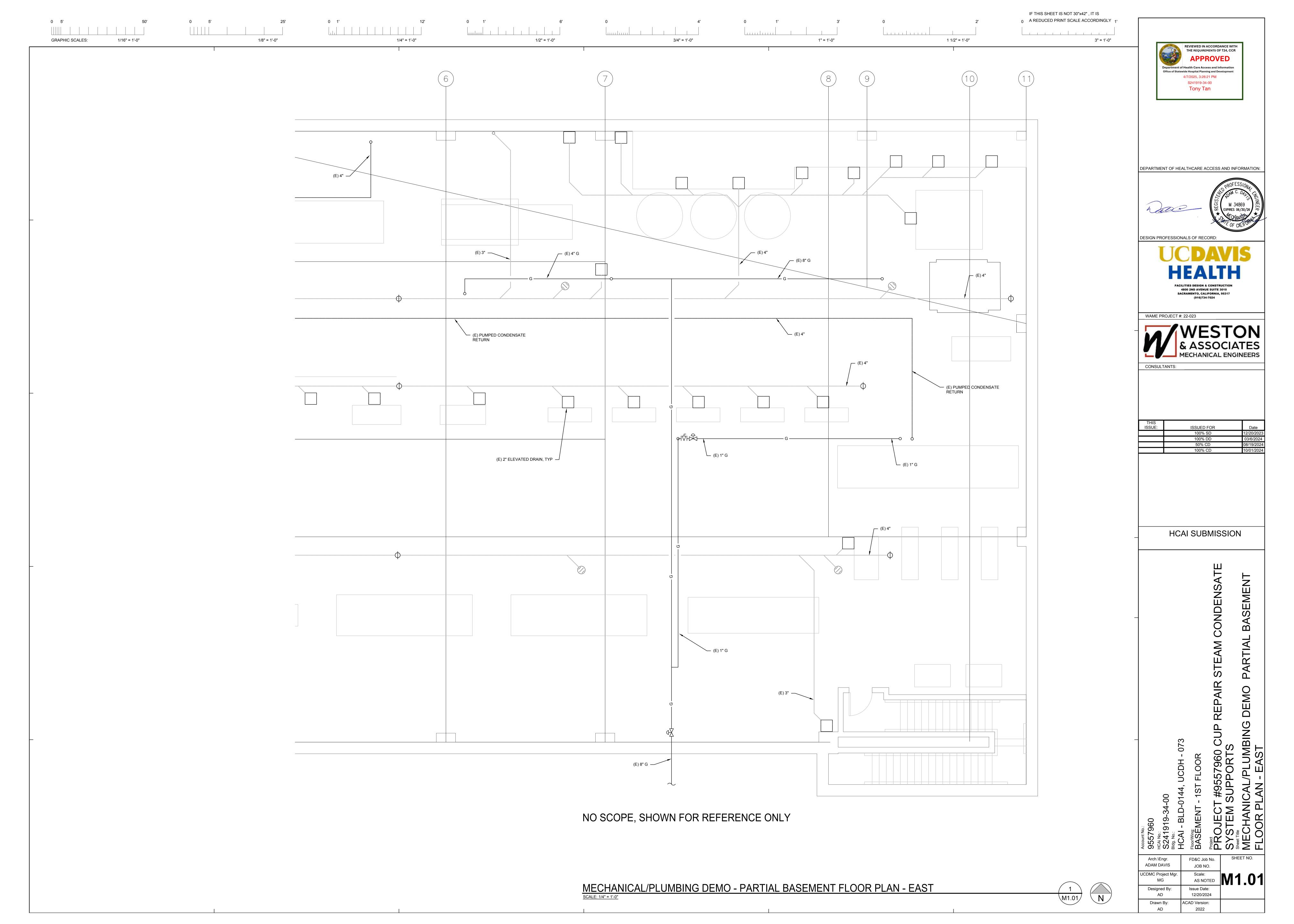
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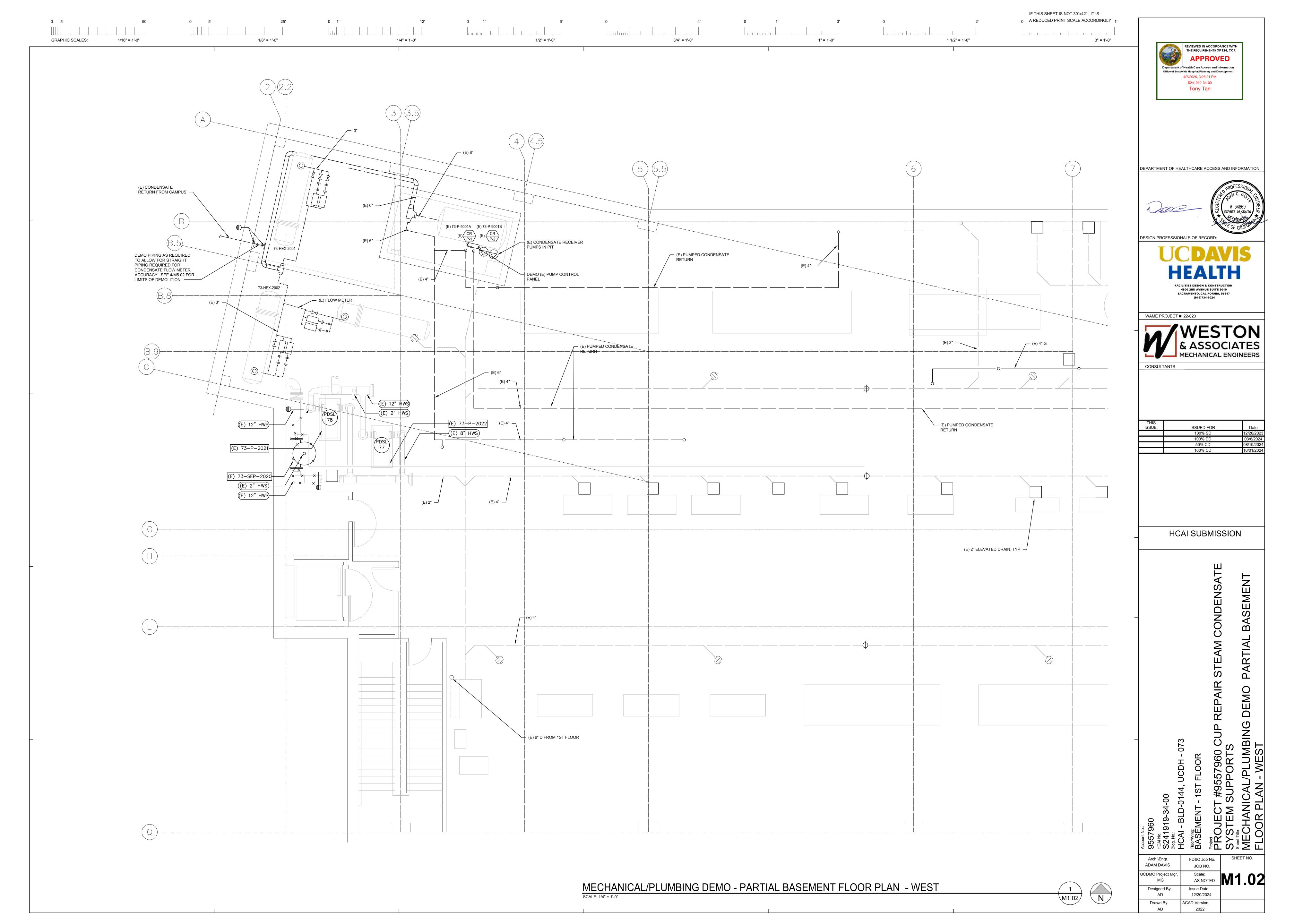
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	100% SD	12/20/202
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	50% CD	08/19/202
	100% CD	10/01/202
1	OSHPD BACKCHECK 1	02/28/202

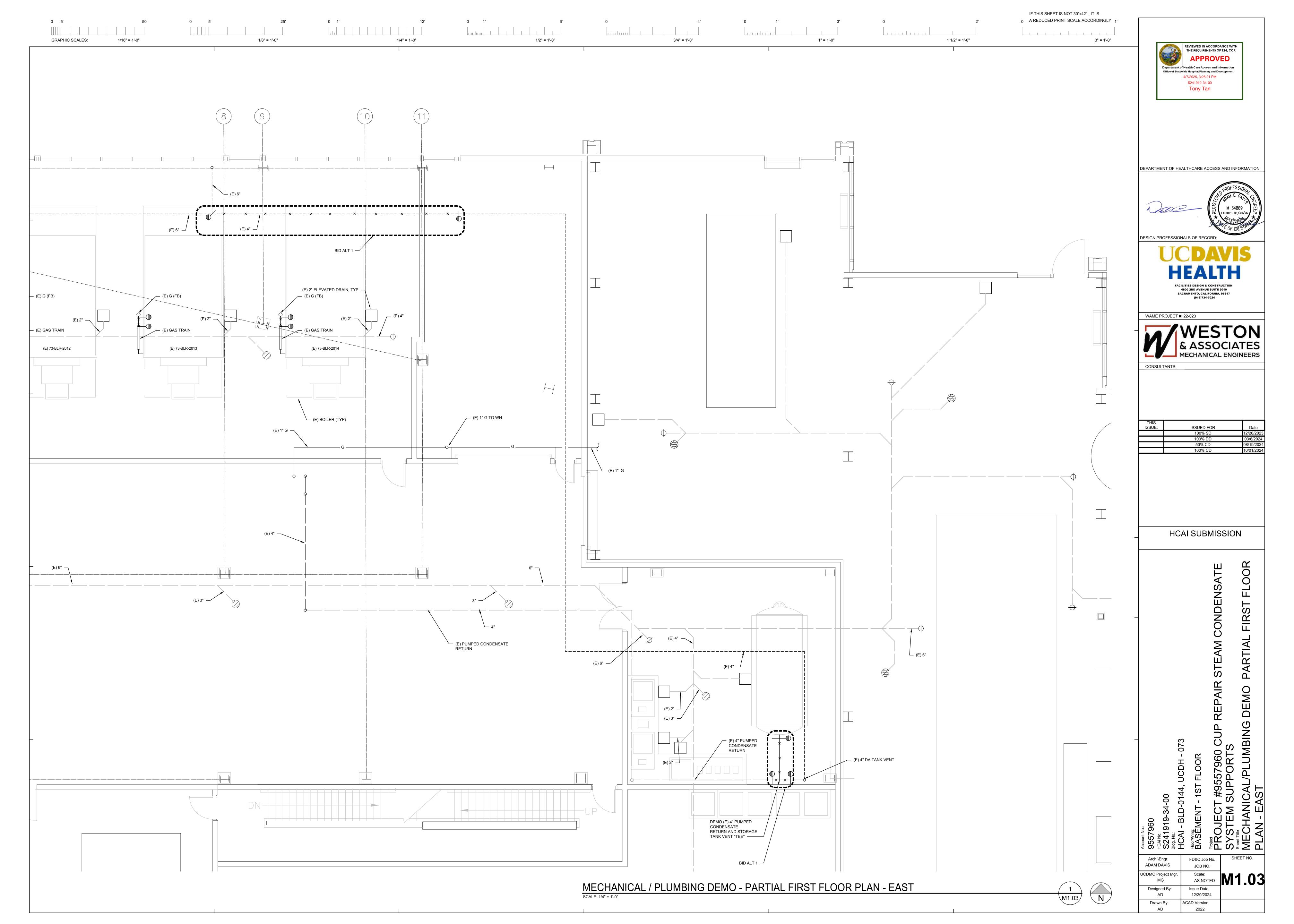
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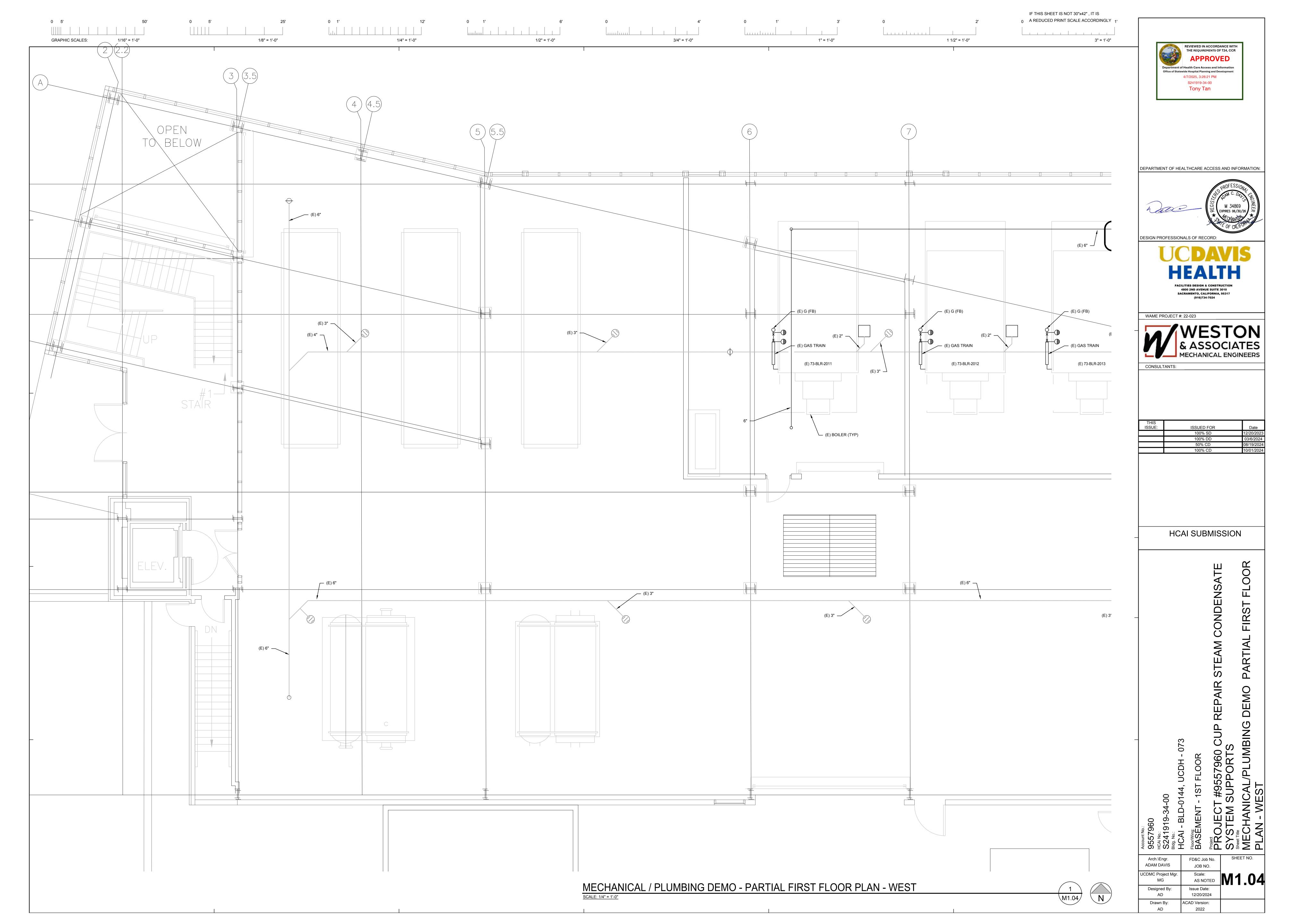
SHEET NO. Arch.\Engr. FD&C Job No. ADAM DAVIS JOB NO. UCDMC Project Mgr. Issue Date: Designed By: 12/20/2024 ACAD Version: Drawn By:

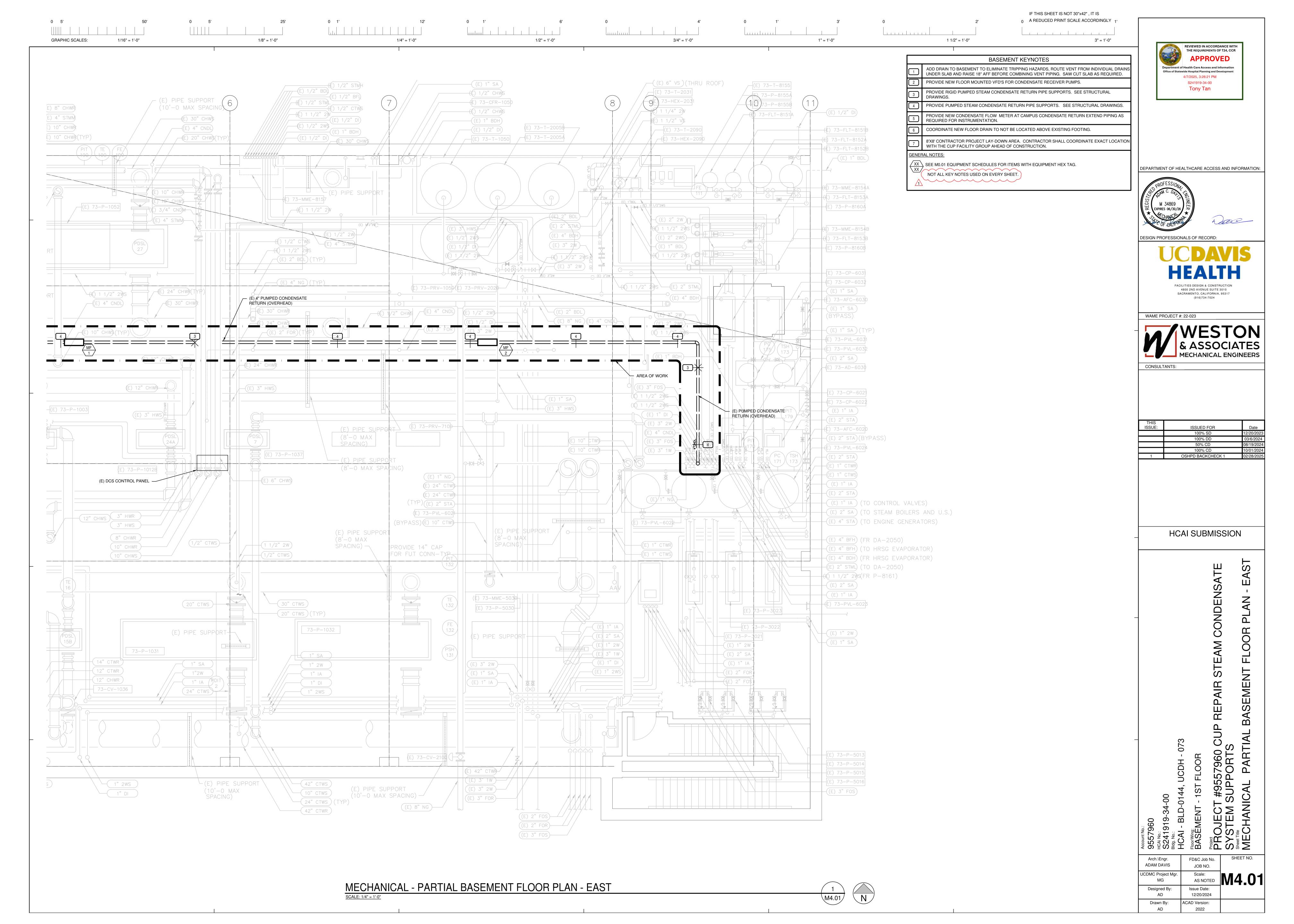
2022

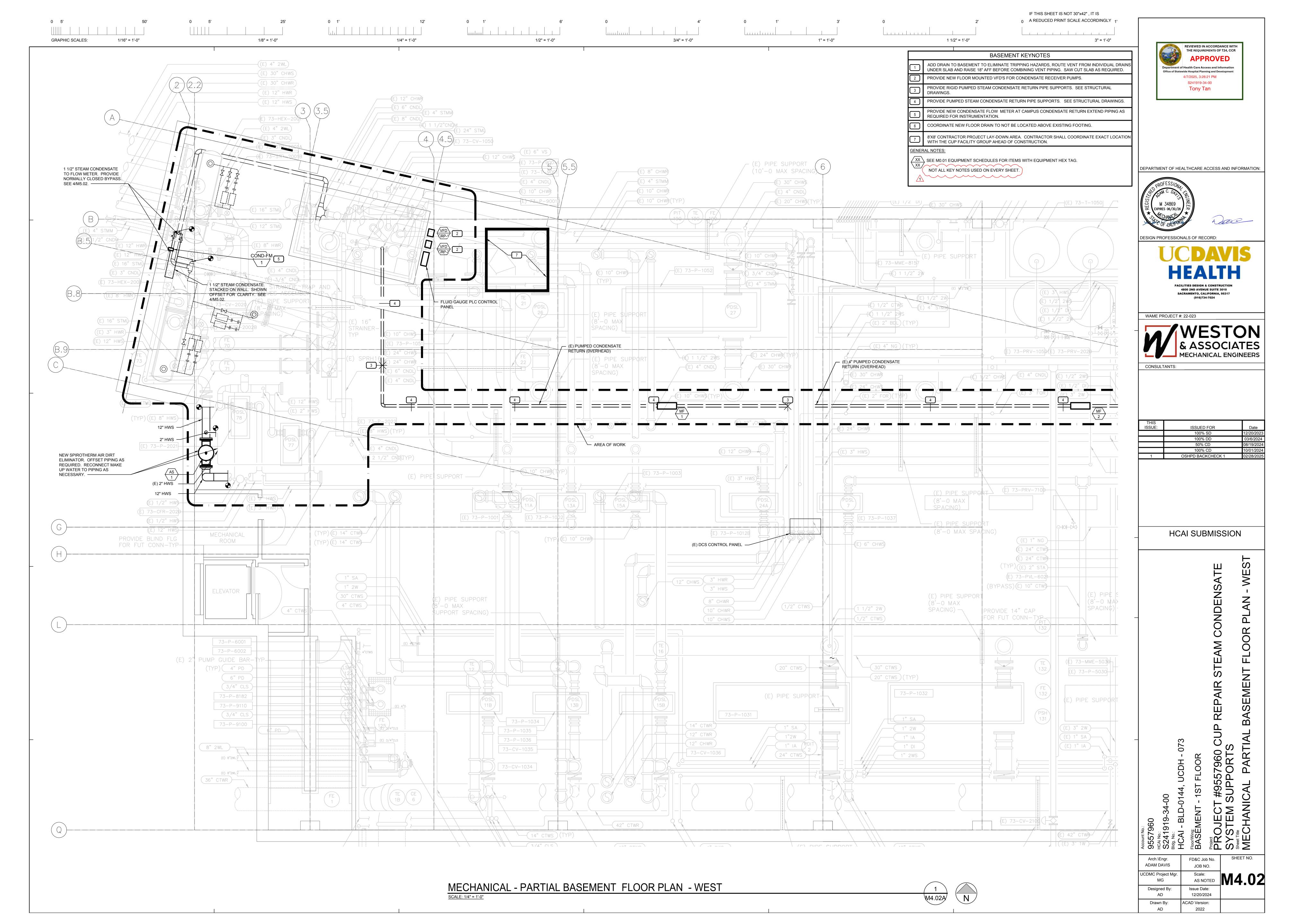


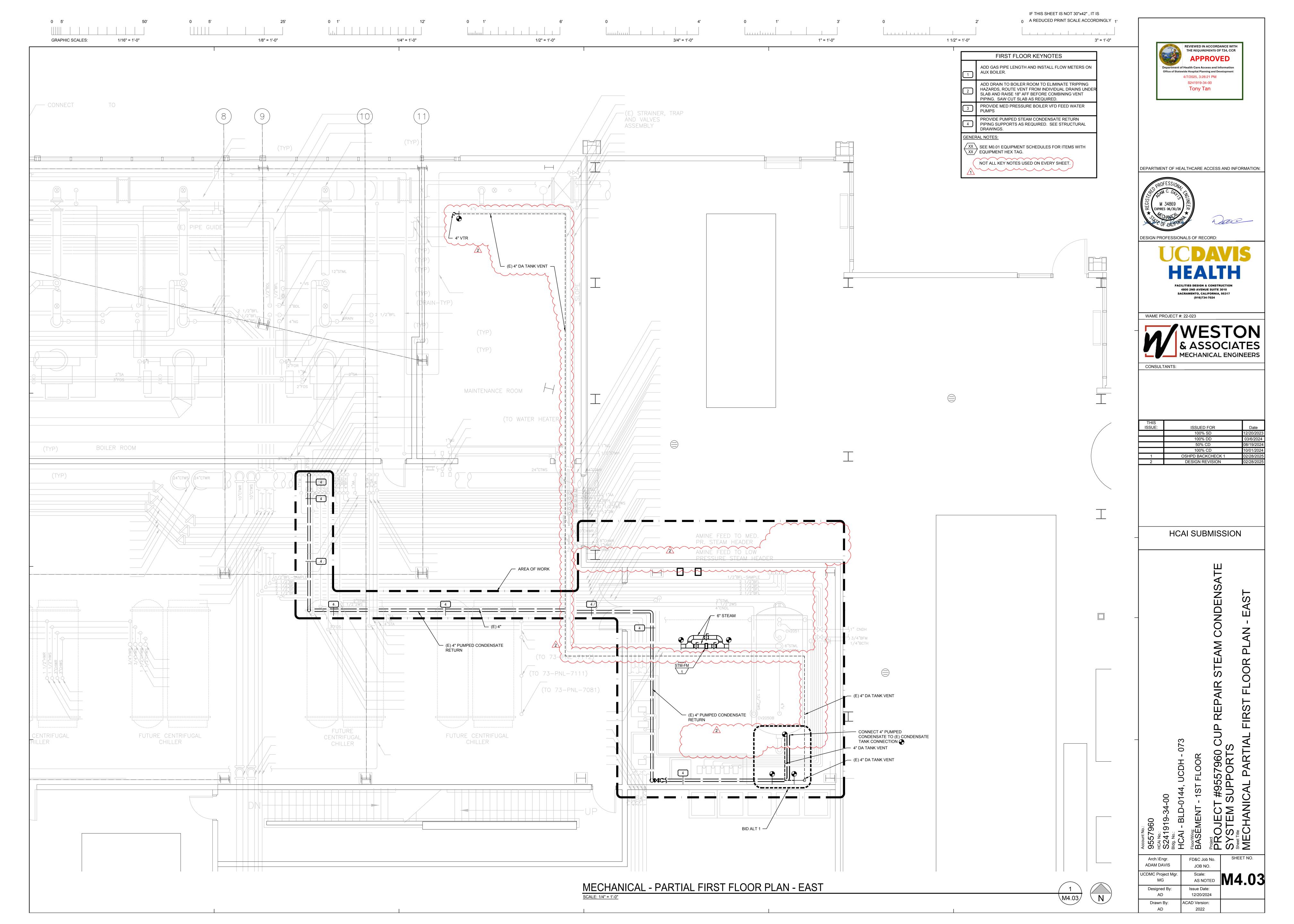


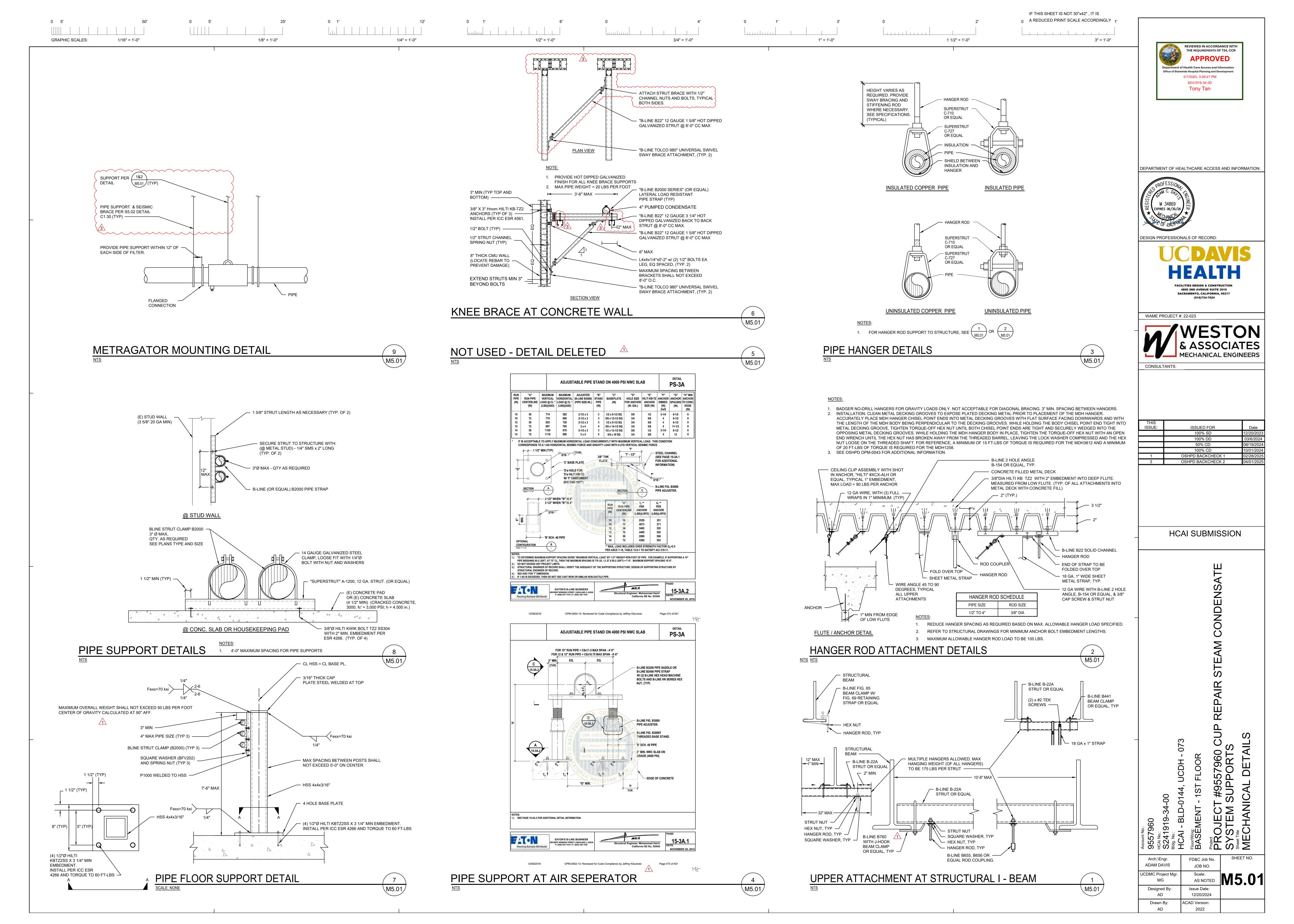


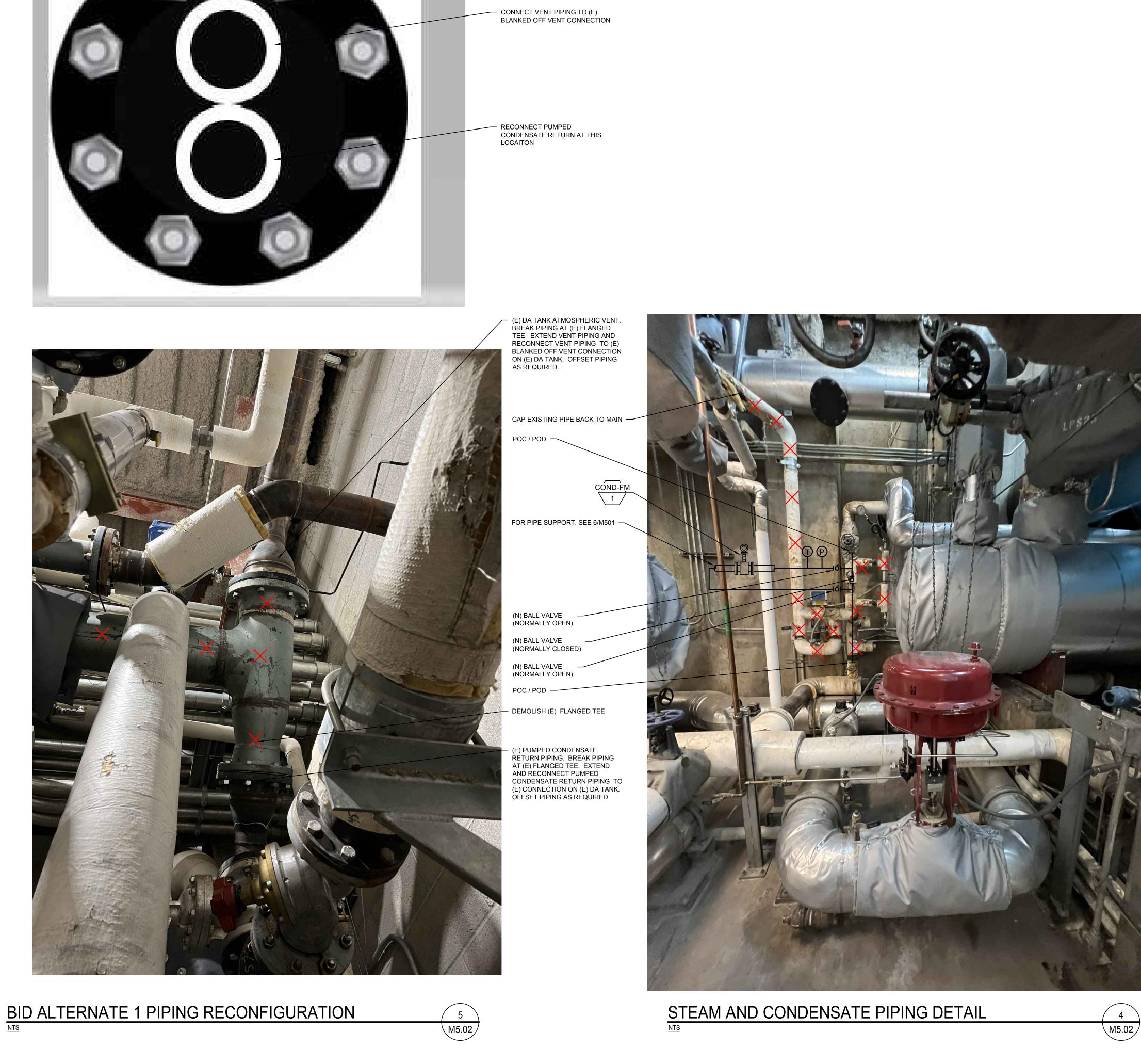






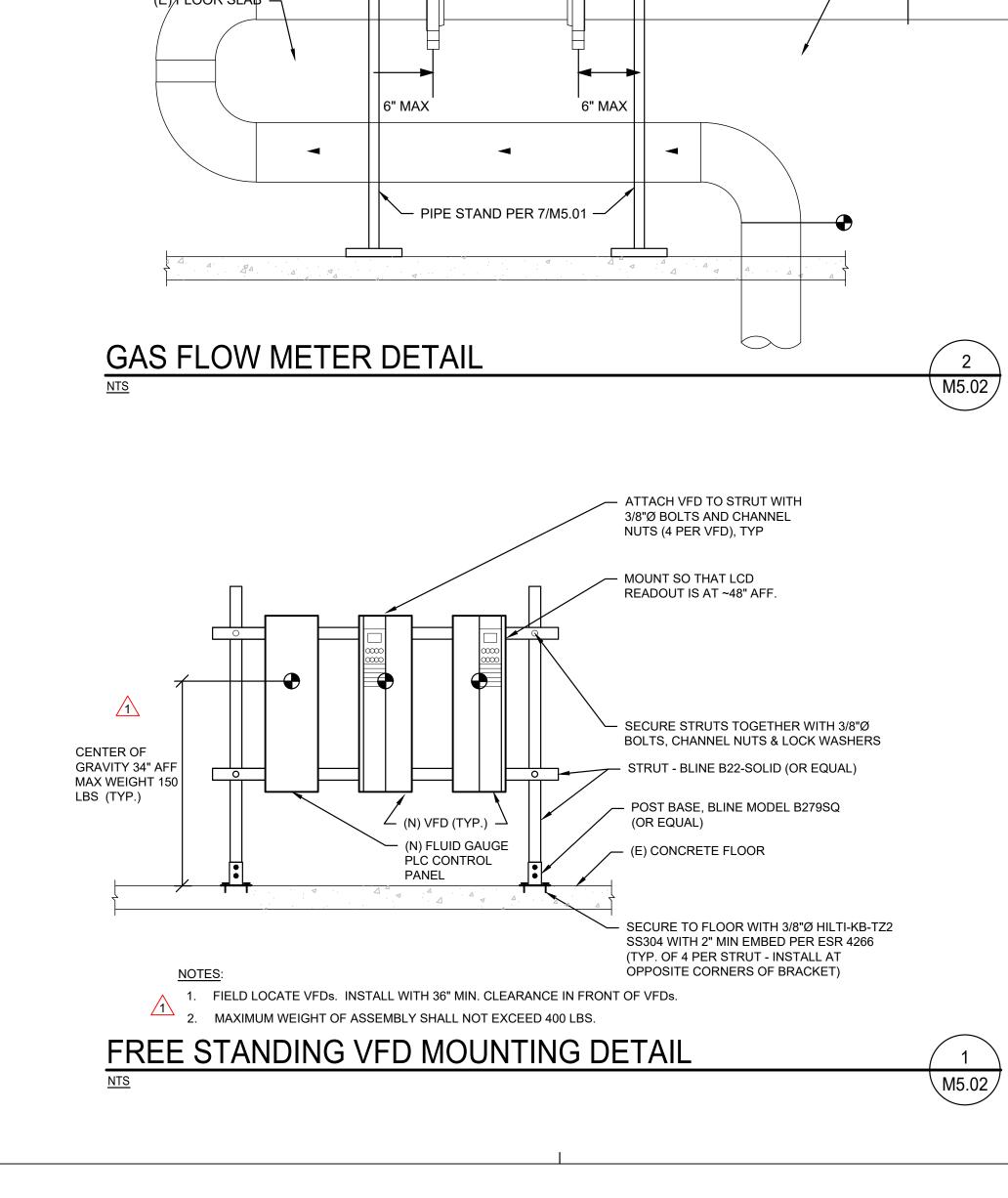


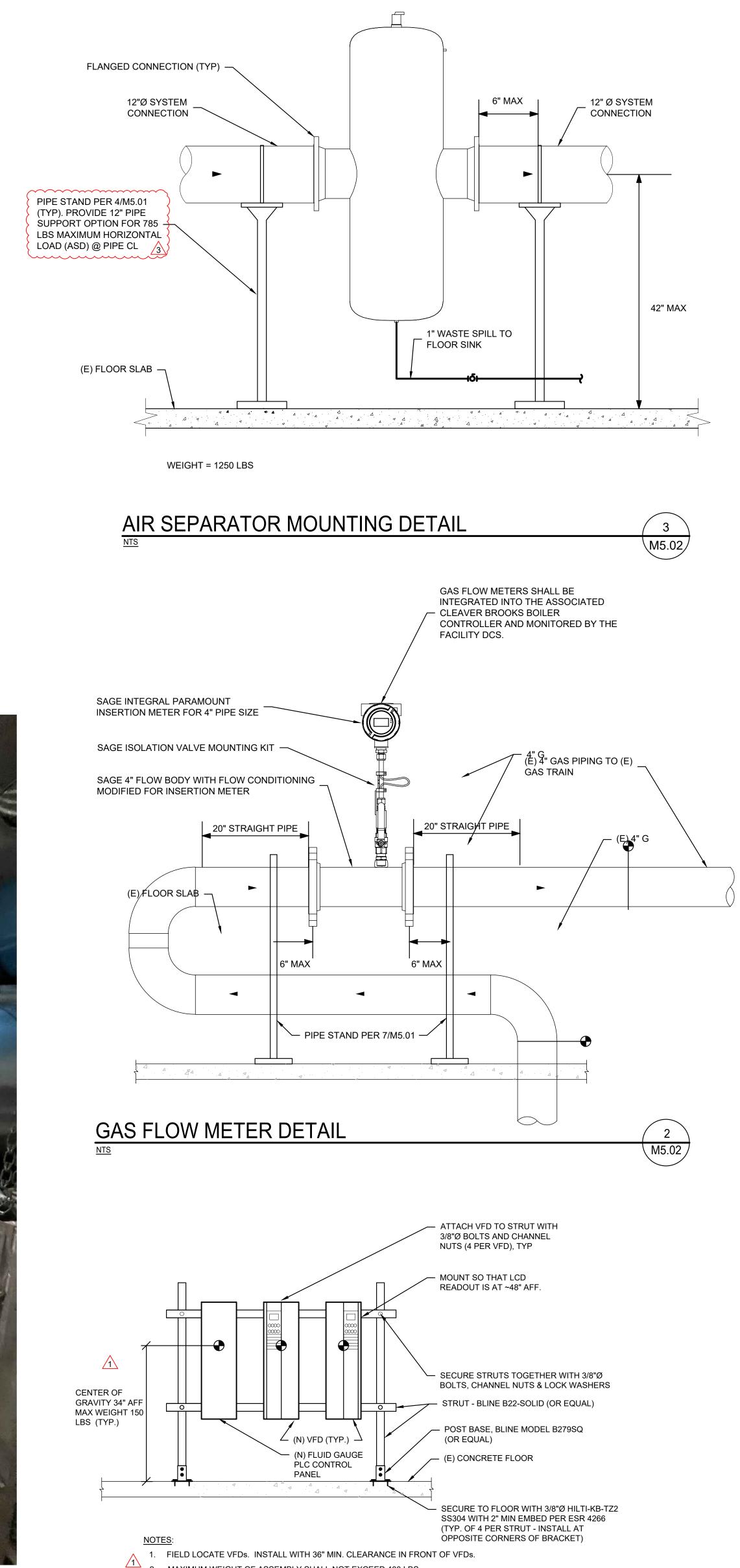


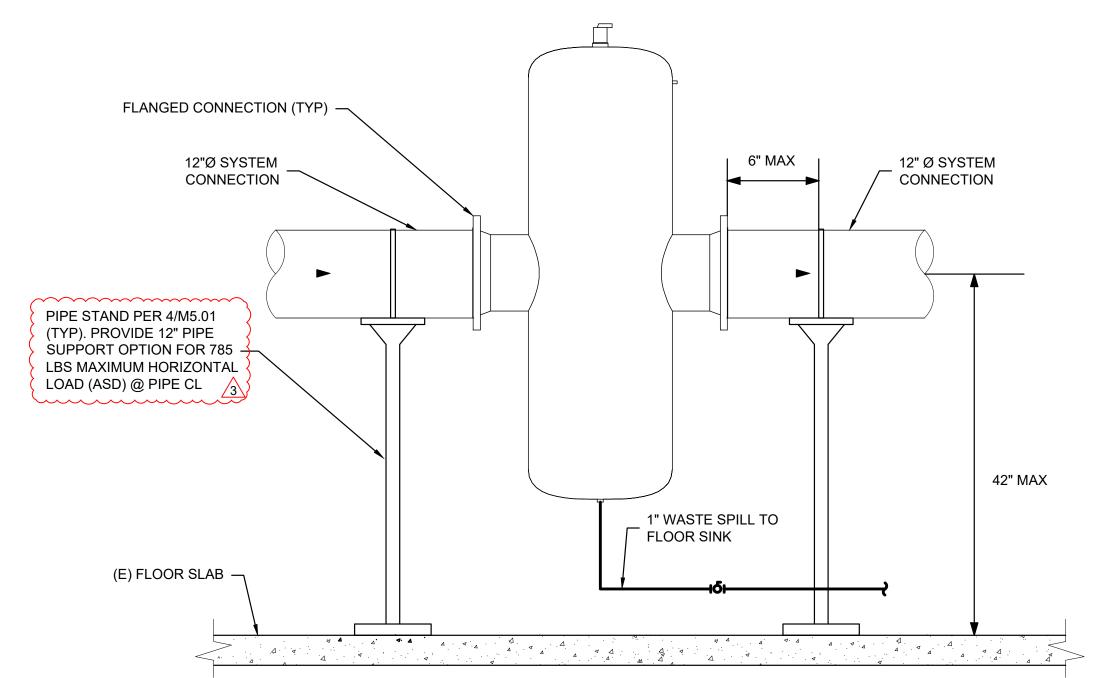


— (E) TANK FLANGE

1/8" = 1'-0"







1 1/2" = 1'-0"



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DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION:



DESIGN PROFESSIONALS OF RECORD: 4800 2ND AVENUE SUITE 3010 SACRAMENTO, CALIFORNIA, 95317 (916)734-7024

WAME PROJECT #: 22-023

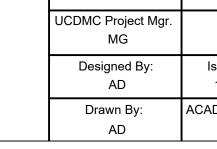
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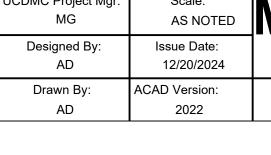
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1	OSHPD BACKCHECK 1	02/28/20
3	OSHPD BACKCHECK 2	04/01/20

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FD&C Job No. JOB NO. Issue Date:

Arch.\Engr. ADAM DAVIS Designed By: 12/20/2024 ACAD Version: Drawn By: 2022





- USE PIPE SIZE TABLE FOR SIZING ALL BRANCH WATER, WASTE, & VENT BRANCH PIPES.
- REFERENCE ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHT.
- WATER BRANCH LINES WHERE LESS THAN 10'-0" LONG MAY BE SAME SIZE AS OUTLETS SCHEDULED ABOVE.

1/8" = 1'-0"

GAS FLOW METER SCHEDULE					
UNIT	LOCATION	"SAGE" MODEL	MINIMUM TURNDOWN	LOW END SENSITIVITY	MAX WORKING PRESSURE
GFM 1	73-BLR-2011	SIP-05-15-AC115-NG	100 to 1	5 SFPM	500 PSIG
GFM 2	73-BLR-2012	SIP-05-15-AC115-NG	100 to 1	5 SFPM	500 PSIG
GFM 3	73-BLR-2013	SIP-05-15-AC115-NG	100 to 1	5 SFPM	500 PSIG
GFM 4	73-BLR-2014	SIP-05-15-AC115-NG	100 to 1	5 SFPM	500 PSIG

NOTES:

- 1. GAS METERS SHALL BE PROVIDED BY RF MACDONALD AND SHALL BE INTEGRATED INTO THE BOILER CONTROL SYSTEM AT EACH BOILER. RF MACDONALD SHALL PROVIDE, INSTALL, INTEGRATE AND VERIFY FUNCTIONALITY. PROVIDE WITH MODBUS COMMUNICATIONS
- 2. SEE 2/M5.02 FOR MOUNTING DETAILS AND PIPING CONFIGURATION

PLUMBING LEGEND

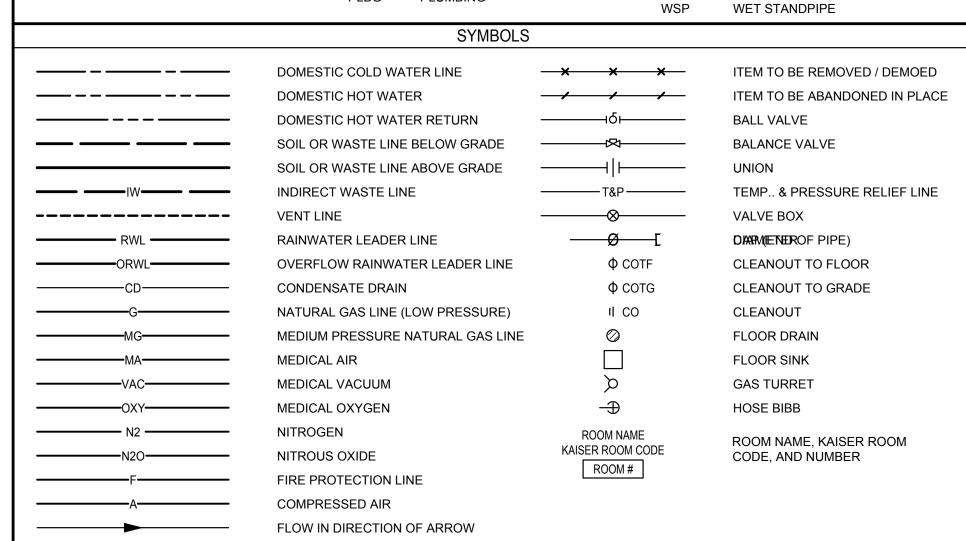
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3" = 1'-0"

ABC	ABOVE CEILING	FT	FEET	POC	POINT OF CONNECTION
AD	ACCESS DOOR	FU	FIXTURE UNITS	POD	POINT OF DISCONNECT
AFF	ABOVE FINISHED FLOOR	G	NATURAL GAS	PRV	PRESSURE REDUCING VALVE
AFG	ABOVE FINISHED GRADE	GCO	GRADE CLEAN OUT	PS	PRESSURE SWITCH
AP	ACCESS PANEL	GD	GARBAGE DISPOSER	PSI	POUNDS PER SQUARE INCH
AQ	AQUASTAT	GLV	GLOBE VALUE	PSIG	POUNDS PER SQUARE INCH GAUGE
ARCH	ARCHITECT	GM	GAS METER	PT	PLUGGED TEE
AV	ACID VENT	GPH	GALLONS PER HOUR	R	RISE / RISER
AVTR	ACID VENT THRU ROOF	GPM	GALLONS PER MINUTE	RD	ROOF DRAIN
AW	ACID WASTE	GPR	GAS PRESSURE REGULATOR	RET	RETURN
BFF	BELOW FINISHED FLOOR	GPRV	GAS PRESSURE REGULATOR	RIO	ROUGH IN ONLY
BFP	BACKFLOW PREVENTER	VALVE		RM	ROOM
BFV	BUTTERFLY VALVE	GSCK	GAS COCK	RO	REVERSE OSMOSIS WATER
3G	BELOW GRADE	GSV	GAS SEISMIC VALVE	RV	RELIEF VALVE
BLV	BALL VALVE	GV	GATE VALVE	RWL	RAINWATER LEADER
CA C	COMPRESSED AIR	GW	GREASE WASTE PIPING	SCD	SECONDARY CONDENSATE DRAIN
AP	CAPACITY	HB	HOSE BIBB	SCH	SCHEDULE
СВ	CATCH BASIN	HD	HOPPER DRAIN	SCW	COLD SOFT WATER
BV	CALIBRATED BALANCE VALVE	HPG	HIGH PRESSURE NATURAL GAS	SD	STORM DRAIN
D.	CONDENSATE DRAIN	HW	DOMESTIC HOT WATER	SH	SHOWER
FH	CUBIC FEET PER HOUR	HWR	DOMESTIC HOT WATER RETURN	SHT	SHEET
CI	CAST IRON	ICW	INDUSTRIAL COLD WATER	SHW	HOT SOFT WATER
CKV	CHECK VALUE	IHW	INDUSTRIAL HOT WATER	SHWR	HOT SOFT WATER RETURN
	CENTER LINE	IHWR	INDUSTRIAL HOT WATER RETURN	SK	SINK
CL		ID	INSIDE DIAMETER		
LG	CEILING	ΙE	INVERT ELEVATION	SMS	SHEET METAL SCREW
MP	CORRUGATED METAL PIPE	IW	INDIRECT WASTE	SOV	SHUT OFF VALVE
0	CLEANOUT	LA	LABORATORY AIR	SS	STAINLESS STEEL
CO2	CARBON DIOXIDE	LAV	LAVATORY	STD	STANDARD
COP	CAP ON END OF PIPE	LBS	POUNDS	STR	STRAINER
OTF	CLEANOUT TO FLOOR	LG	LABORATORY GAS	TA	TO ABOVE
COTG	CLEANOUT TO GRADE	LP	LOW PRESSUE	TB	TO BELOW
P	CIRCULATING PUMP			TEMP.	TEMPERATURE
R	CONCENTRIC REDUCER	LWT	LEAVING WATER TEMPERATURE	TH	THERMOMETER
SK	CLINIC SINK	MA	MEDICAL AIR	TMV	THERMOSTATIC MIXING VALVE
CV	CONTROL VALVE	MAX	MAXIMUM	TP	TRAP PRIMER
W	DOMESTIC COLD WATER	MFR	MANUFACTURER	TYP	TYPICAL
)	DROP	MGC	MEDICAL GAS COLUMN	TW	TEMPERED WATER
CW	DOMESTIC COLD WATER	MIN	MINIMUM	UC	UNDER COUNTER
)D	DECK DRAIN	MISC	MISCELLANEOUS	UF	UNDER FLOOR
DET	DETAIL	MPG	MEDIUM PRESSURE NATURAL GAS	UG	UNDERGROUND
)F	DRINKING FOUNTAIN	(N)	NEW	UN	UNION OR FLANGE
HW	DOMESTIC HOT WATER	N2	NITROGEN	UNO	UNLESS NOTED OTHERWISE
HWR	DOMESTIC HOT WATER RETURN	N2O	NITROUS OXIDE	UR	URINAL
Ol	DEIONIZED WATER	NC	NORMALLY CLOSED	V	SANITARY VENT
ON	DOWN	NIC	NOT IN CONTRACT	VB	VALVE BOX
DWG	DRAWING	NO	NORMALLY OPEN	VAC	MEDICAL VACUUM
E)	EXISTING	NTS	NOT TO SCALE	VR	VENT RISER
EWH	ELECTRIC WATER HEATER	O2	OXYGEN	VTR	VENT THRU ROOF
EWT	ENTERING WATER TEMPERATURE	ОС	ON CENTER	W	SANITARY WASTE
		OFCI	OWNWER FURNISHED	WD	WASTE DROP
-A	FROM ABOVE	CONTRAC	TOR INSTALLED	W/	WITH
-B	FROM BELOW	ORD	OVERFLOW ROOF DRAIN		
-C	FLEXIBLE CONNECTION	ORWL	OVERFLOW RAIN WATER LEADER	W/O	WITHOUT
CO	FLOOR CLEAN OUT	ОН	OVERHEAD	WAGD DISPOSAL	WASTE ANESTHESIA GAS
-D	FLOOR DRAIN	P&TRV	PRESSURE & TEMPERATURE	WC	WATER CLOSET
HC	FIRE HOSE RACK & CABINET	RELIEF	VALVE PIPING	WCO	WALL CLEAN OUT
LR	FLOOR	P/L	PROPERTY LINE	WD	WASTE DROP
		PAN	PIPE ANCHOR	VVD	WASIL DRUF
	FEET PER MINUTE	FAIN	THE THIOTION	\∧/⊔	MALL HADDVILL
SH	FIRE SPRINKLER HEAD	PG	PRESSURE GAUGE	WH	WALL HYDRANT
FPM FSH FS FSP				WH WHA WM	WALL HYDRANT WATER HAMMER ARRESTER WATER METER



GENERAL NOTES

REDUCER

- MECHANICAL AND PLUMBING DETAILS APPLY TO ALL BUILDINGS WHETHER REFERENCED OR NOT.
- CONTRACTOR TO OFFSET AND PIPING AROUND EXISTING CONDITIONS.

BEING INSTALLED.

- DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC IN NATURE AND ARE NOT INTENDED TO SHOW EVERY OFFSET, FITTING, OR STRUCTURAL DIFFICULTY THAT MAY BE ENCOUNTERED DURING INSTALLATION OF WORK. THE CONTRACTORS SHALL COORDINATE LOCATION OF ALL DUCTWORK AND PIPING WITH ALL OTHER TRADES ON THIS PROJECT. LOCATION OF ALL ITEMS NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. EXACT LOCATIONS NECESSARY TO SECURE BEST CONDITIONS AND RESULTS MUST BE DETERMINED AT THE JOB SITE AND SHALL HAVE THE APPROVAL OF THE ARCHITECT BEFORE
- ALL VALVES SHALL BE FULL LINE SIZES UNLESS NOTED OTHERWISE.
- PIPING SHALL BE SUPPORTED IN ACCORDANCE TO OPM-0043-13 BY MASON WEST.
- THE INTENT OF THE CONSTRUCTION DOCUMENTS IS TO RECONSTRUCT THE HOSPITAL BUILDING IN ACCORDANCE WITH THE 2016 CBSC. SHOULD ANY CONDITION DEVELOP NOT COVERED BY THE APPROVED CONSTRUCTION DOCUMENTS, WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH THE 2016 CBSC, AMENDED CONSTRUCTION DOCUMENTS (ACDS) DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY OSHPD BEFORE PROCEEDING WITH THE
- MECHANICAL DETAILS SHEETS APPLY TO THE PLUMBING DRAWINGS. REFERENCE M5.01 & M5.02.

APPLICABLE CODES

ALL WORK PERFORMED UNDER THIS CONTRACT IS TO CONFIRM

- TO THE FOLLOWING CODES AND REGULATIONS:
- CALIFORNIA CODE OF REGULATIONS TITLE 24
- CALIFORNIA BUILDING CODE, 2022 CALIFORNIA MECHANICAL CODE, 2022
- CALIFORNIA PLUMBING CODE, 2022 CALIFORNIA FIRE CODE, 2022
- CALIFORNIA ELECTRICAL CODE, 2022 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS, 2022
- THE ABOVE CODES AND REGULATIONS REFER TO THE LATEST EDITION OR REVISION IF FORCE ON THE DATE OF THE CONTRACT, UNLESS OTHERWISE STATED. NOTHING ON THE DRAWINGS IS TO BE CONSTRUED AS REQUIRING OR PERMITTING WORK THAT IS CONTRARY TO THE LISTED CODES AND REGULATIONS, OR OTHER LOCAL, STATE OR FEDERAL CODES OR REGULATIONS WHICH MAY BE APPLICABLE.



DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION:





4800 2ND AVENUE SUITE 3010 SACRAMENTO, CALIFORNIA, 95317 (916)734-7024

WAME PROJECT #: 22-023

CONSULTANTS:

THIS ISSUE:	ISSUED FOR	Date
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	100% CD	10/01/20
2	DESIGN REVISION	02/28/20
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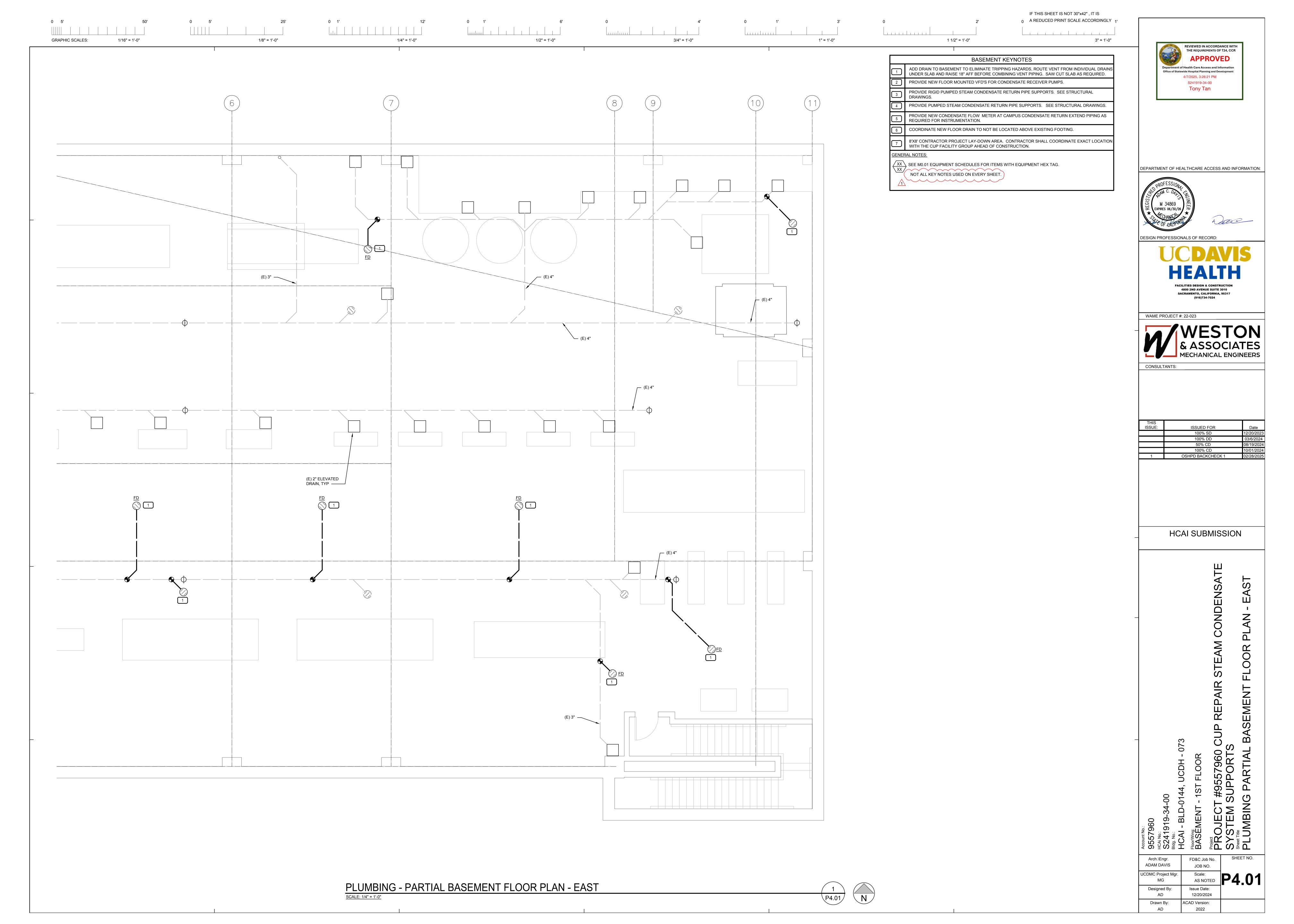
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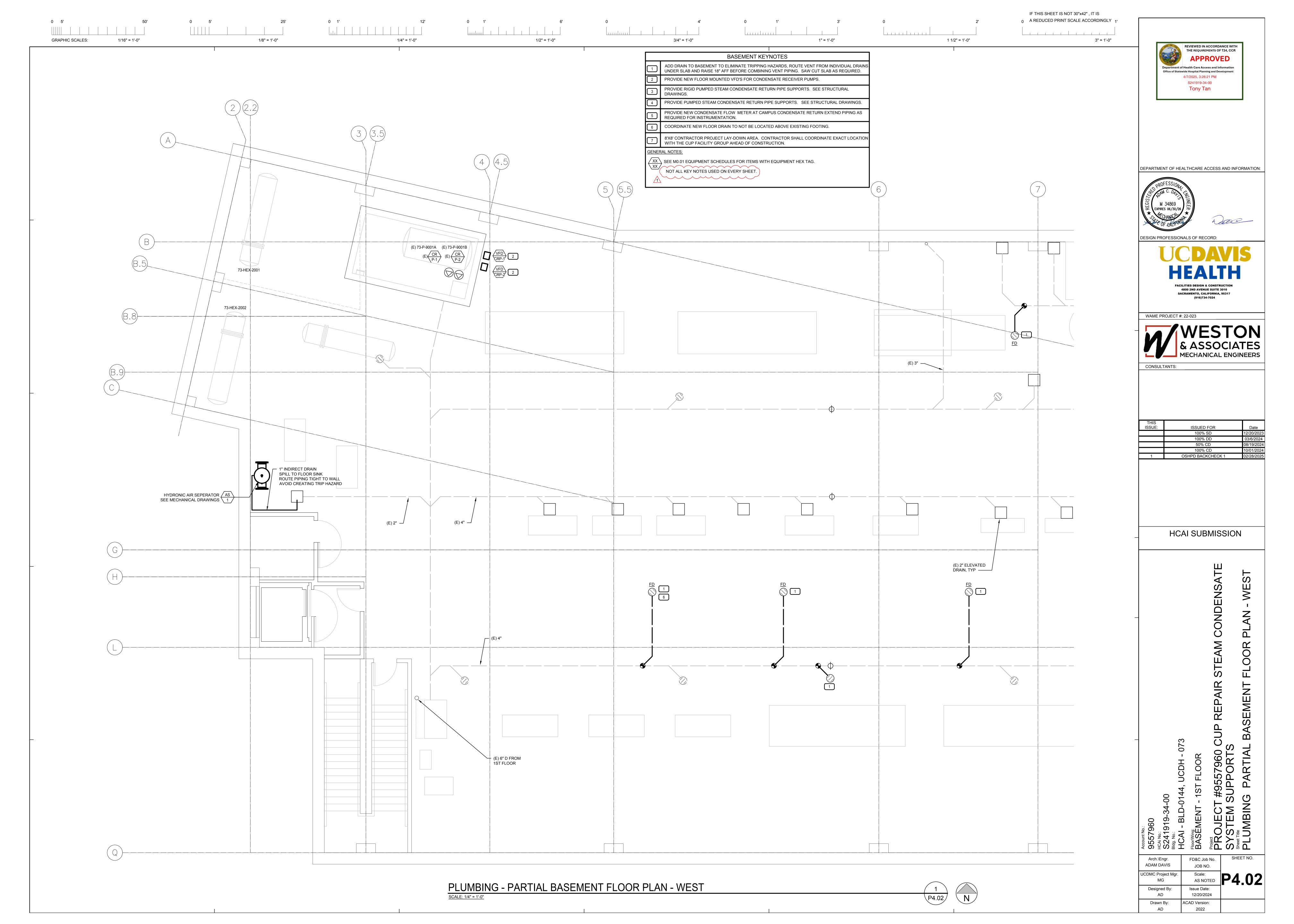
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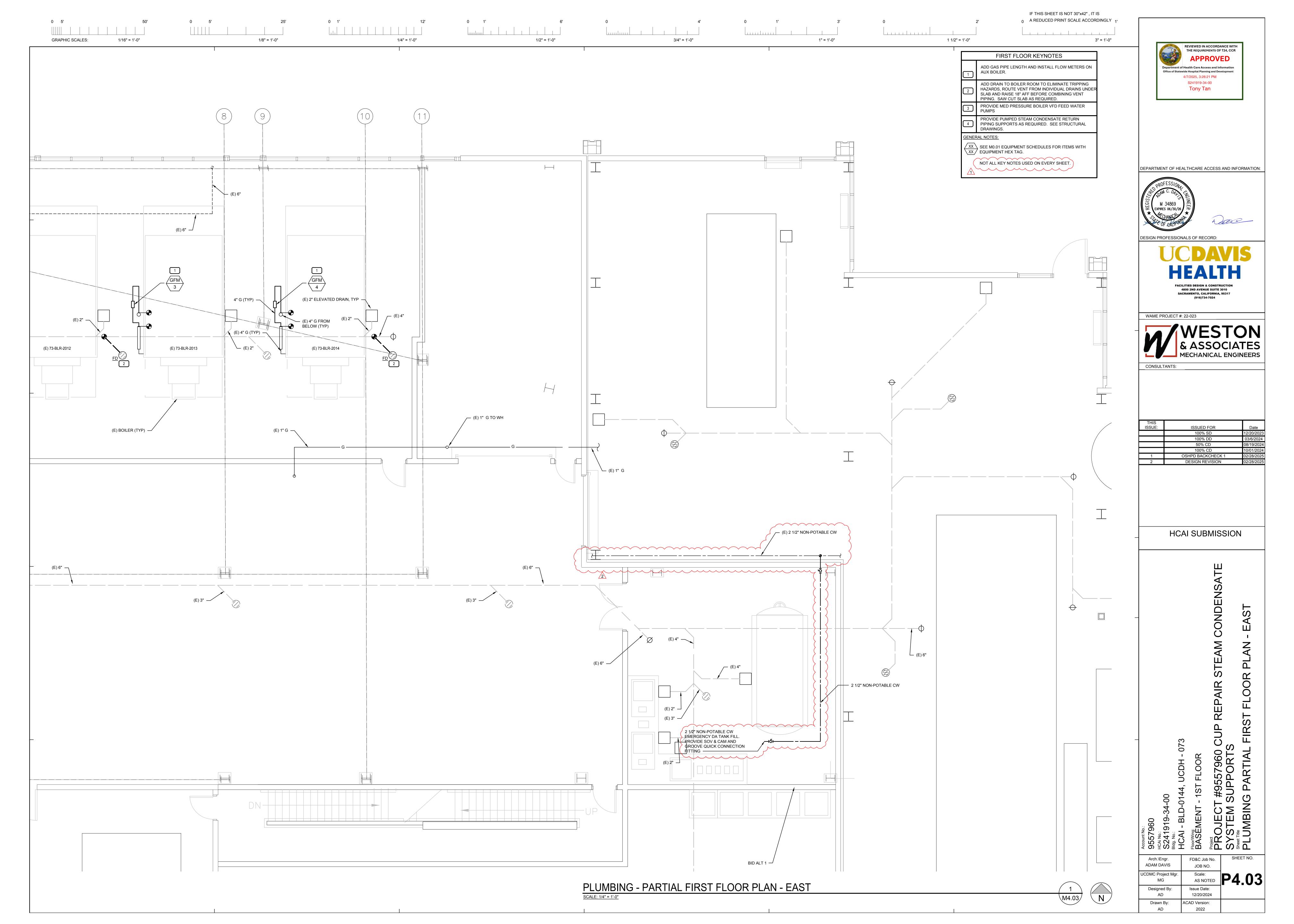
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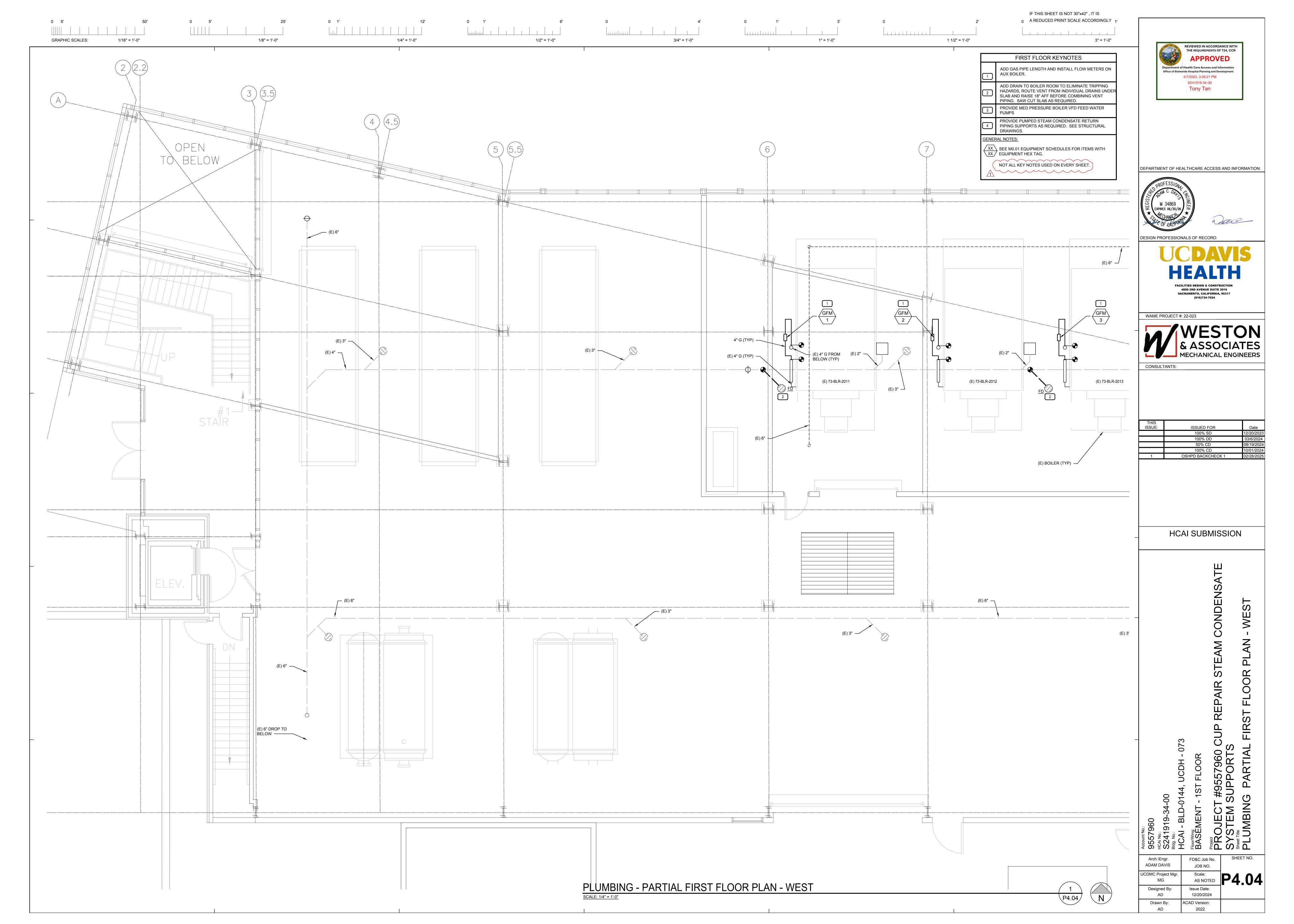
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SHEET NO. Arch.\Engr. ADAM DAVIS UCDMC Project Mgr. Designed By: Issue Date: 12/20/2024 ACAD Version: Drawn By: 2022









ABBREVIATIONS 1PH, 3PH 1 PHASE, 3 PHASE 1P. 2P. 3P 1 POLE, 2 POLE, 3 POLE MCA MINIMUM CIRCUIT AMPACITY MCB 3W, 4W 3 WIRE, 4 WIRE MAIN CIRCUIT BREAKER MCC DEMO, DEMOLISH MOTOR CONTROL CENTER MLO **EXISTING** MAIN LUGS ONLY MOCP MAXIMUM OVER-CURRENT EXISTING RELOCATED PROTECTION RELOCATE EMPTY CONDUIT W/ PULL-LINE A, AMPS **AMPERES** NORMALLY CLOSED NURSE CALL TERMINAL CABINET **ALTERNATING CURRENT** FRAME RATING IN AMPERES NEC NATIONAL ELECTRIC CODE NEMA ABOVE FINISHED FLOOR NATIONAL ELECTRICAL AMPERES INTERRUPTING MANUFACTURER ASSOCIATION CAPACITY NIES NOT INCLUDED IN ELECTRICAL AL, ALUM ALUMINUM NL NO NTS **AUTO TRANSFER SWITCH** NIGHT LIGHT NORMALLY OPEN TRIP RATING IN AMPERES AWG NOT TO SCALE AMERICAN WIRE GAUGE BUILDING TELECOM ROOM OCP OFCI OVER-CURRENT PROTECTION OWNER FURNISHED CONTRACTOR INSTALLED CONDUIT OFOI OWNER FURNISHED OWNER CIRCUIT BREAKER INSTALLED CALIFORNIA ELECTRICAL CODE **CURRENT TRANSFORMER** POTENTIAL TRANSFORMER COPPER PVC POLYVINYL CHLORIDE CONDUIT DIRECT CURRENT RUNNING LOAD AMP RSC RIGID STEEL CONDUIT EACH **ELEC** ELECTRICAL ELECTRICAL METALLIC TUBING SURGE PROTECTION DEVICE EMT SPD SPDT SINGLE POLE DOUBLE THROW SPST SST SINGLE POLE SINGLE THROW FIRE ALARM SOLID STATE TRIP FACP FIRE ALARM CONTROL PANEL FATC FIRE ALARM TERMINAL CABINET FULL LOAD AMPS TELECOM EQUIPMENT ROOM FOOT OR FEET TELECOM ROOM THERMAL MAGNETIC TTB TERMINAL BACKBOARD G, GND GROUND **GAUGE GROUND FAULT CIRCUIT** UNDERGROUND UNDERWRITERS LAB. INTERRUPTER GROUND FAULT INTERRUPTER UON UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY HAND-OFF-AUTO HORSE POWER **VOLT-AMPS** VAC VOLTS ALTERNATE CURRENT J-BOX JUNCTION BOX WATTS ONE THOUSAND VOLT-AMPS WCR WITHSTAND & CLOSING RATING ONE THOUSAND WATTS WEATHERPROOF

LIGHTING CONTROL PANEL

LIGHTING

LTG

-X-

TRANSFORMER

TRANSFER SWITCH

XFER

1/2" = 1'-0"

1/4" = 1'-0"

0 5'

GRAPHIC SCALES:

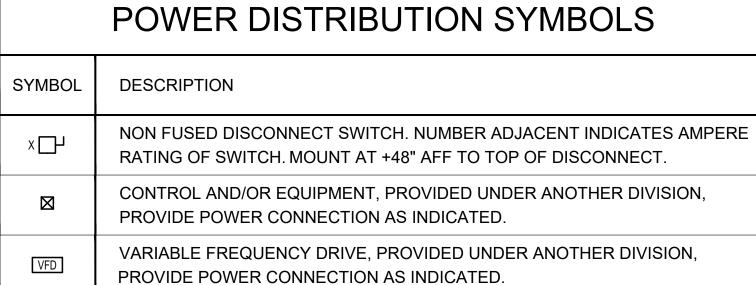
1/16" = 1'-0"

1/8" = 1'-0"

1 1/2" = 1'-0" 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42", IT IS

A REDUCED PRINT SCALE ACCORDINGLY



STANDARD ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION
(XX)	NUMBERED NOTE.
-	ENLARGED PLAN OR DETAIL CALL-OUT.

GENERAL ELECTRICAL NOTES

WHERE PROVIDED, THROUGH-PENETRATION FIRESTOP SYSTEM AND MEMBRANE PENETRATION DETAILS SHOWN IN THE DETAILS ARE FOR REFERENCE ONLY. THROUGH- PENETRATIONS AND MEMBRANE PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM OR MEMBRANE PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER OR AS OTHERWISE PERMITTED BY CBC, SECTION 714. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS AND MEMBRANE PENETRATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION DETAILS FOR LISTED SYSTEMS. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS, MEMBRANE PENETRATION PROTECTION AND OTHER PERMITTED MEANS AND METHODS OF PENETRATION PROTECTION SHALL BE SUBMITTED FOR HCAI FLSO REVIEW AND APPROVAL PRIOR TO INSTALLATION.

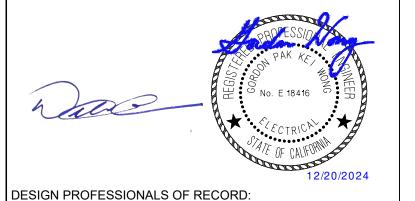
- 2. ALL ELECTRICAL EQUIPMENT TO BE INSTALLED OR PERMANENTLY CONNECTED (HARDWIRED) SHALL BE LISTED, LABELED, OR CERTIFIED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) PER CEC 110.2.
- 3. ALL EQUIPMENT SHALL BE USED IN ACCORDANCE WITH LISTING PER CEC 110.3B.

SHEET INDEX

SHEET	DESCRIPTION
E0.01	ABBREVIATIONS, SYMBOLS, & SHEET INDEX
E1.01	OVERALL BASEMENT FLOOR PLAN - ELECTRICAL
E1.02	OVERALL FIRST FLOOR PLAN - ELECTRICAL
E2.01	PARTIAL BASEMENT FLOOR PLAN - DEMO ELECTRICAL (WEST)
E3.01	PARTIAL BASEMENT FLOOR PLAN - NEW ELECTRICAL (WEST)
E5.01	PARTIAL ONE LINE DIAGRAM
E5.02	PARTIAL ONE LINE DIAGRAM
E6.01	DETAILS



DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION:





WAME PROJECT #: 22-023

WESTON

& ASSOCIATES

MECHANICAL ENGINEERS

& ASSOCIATES
MECHANICAL ENGINEERS

CONSULTANTS:

Project Number K179

Contact GORDON



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HCAI SUBMISSION

UP REPAIR STEAM CONDENSATE

PROJECT #9557960 CUP REPAIR STEAM CON SYSTEM SUPPORTS
Sheet Title
ABBREVIATIONS, SYMBOLS, & SHEET INDEX

Arch.\Engr.
ADAM DAVIS

UCDMC Project Mgr.
MG

Designed By:
GORDON

Drawn By:
BRIANNA

Arch.\Engr.
FD&C Job No.
JOB NO.

SHEET NO.

SHEET NO.

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AS NOTED

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